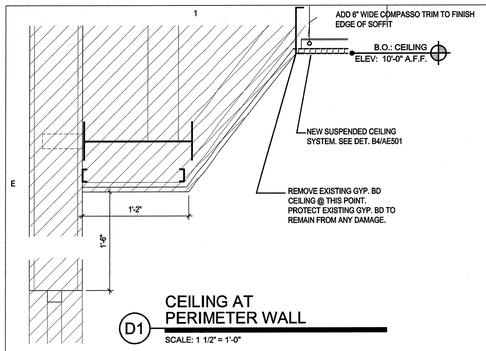
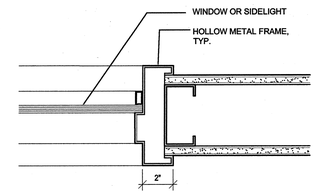
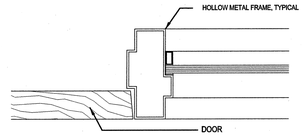


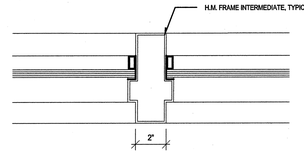
D1 CEILING AT PERIMETER WALL
SCALE: 1 1/2" = 1'-0"



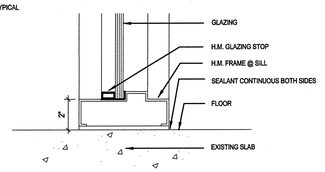
D2 TYPICAL JAMB/HEADER AT INTERIOR WINDOWS
SCALE: 3" = 1'-0"



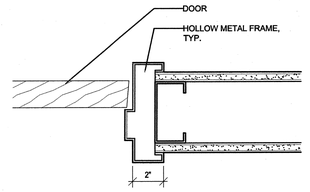
D3 TYPICAL H.M. JAMB @ SIDELIGHT
SCALE: 3" = 1'-0"



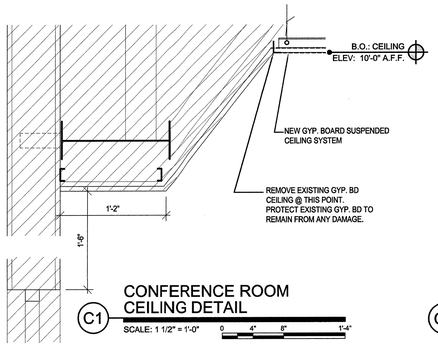
D4 TYPICAL H.M. FRAME
SCALE: 3" = 1'-0"



D5 H.M. SILL
SCALE: 3" = 1'-0"



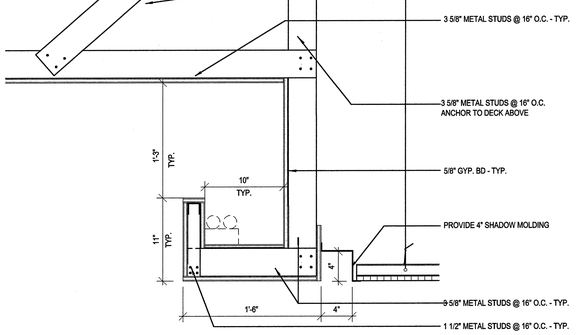
D6 TYPICAL JAMB/HEADER AT INTERIOR DOORS
SCALE: 3" = 1'-0"



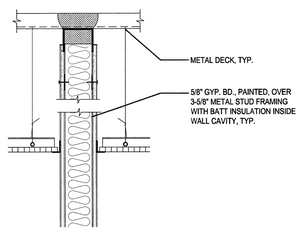
C1 CONFERENCE ROOM CEILING DETAIL
SCALE: 1 1/2" = 1'-0"

C2 NOT USED
SCALE: N/A

C3 NOT USED
SCALE: N/A

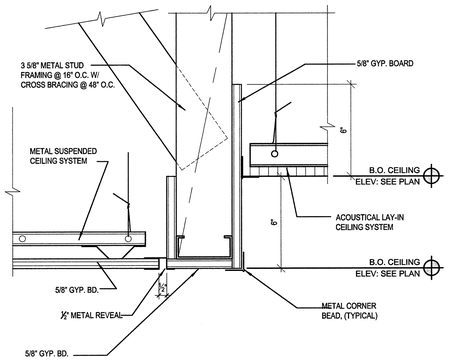


C4 COVE CEILING @ MAIN LOBBY
SCALE: 1 1/2" = 1'-0"

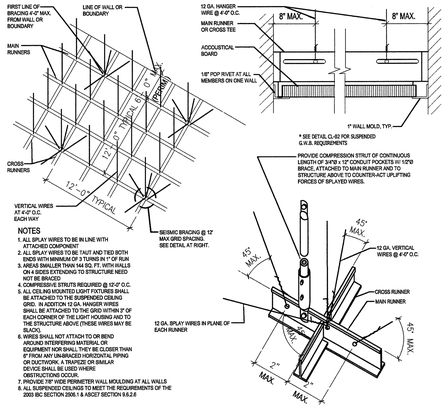


B1 WALL/ CEILING DETAIL
SCALE: 1 1/2" = 1'-0"

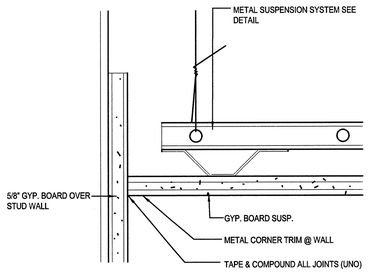
B2 NOT USED
SCALE: N/A



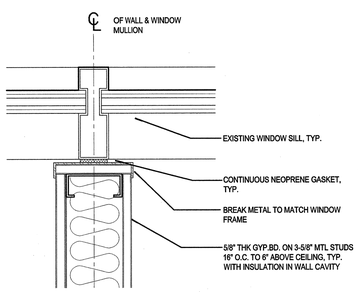
B3 CEILING DETAIL
SCALE: 3" = 1'-0"



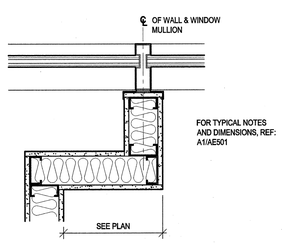
B4 TYPICAL CEILING SUSPENSION AND SEISMIC BRACING
SCALE: NTS.



B5 TYP. CEILING DETAIL
SCALE: 6" = 1'-0"

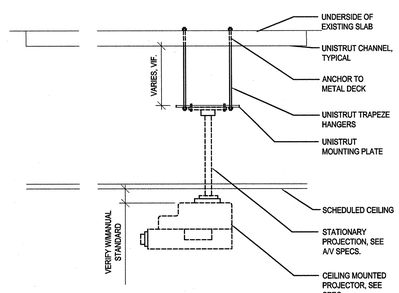


A1 PARTITION @ WINDOW MULLION
SCALE: 3" = 1'-0"

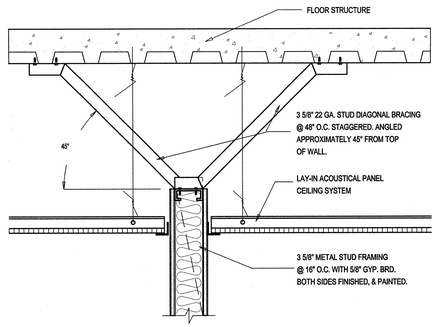


A2 PARTITION @ OFFSET WINDOW MULLION
SCALE: 1 1/2" = 1'-0"

A3 NOT USED
SCALE: N/A



A4 SUPPORT FOR CEILING MOUNTED PROJECTOR
SCALE: NTS



A5 TYPICAL WALL BRACING DETAIL
SCALE: 1 1/2" = 1'-0"

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah

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INTERIOR DETAILS

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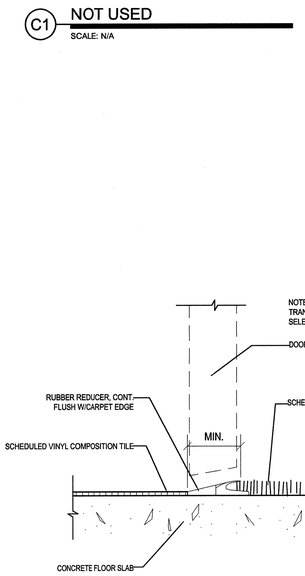
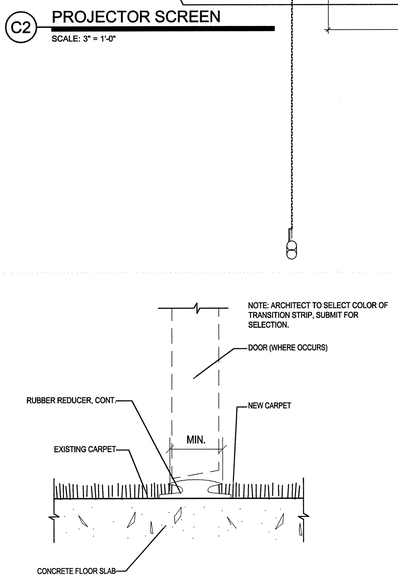
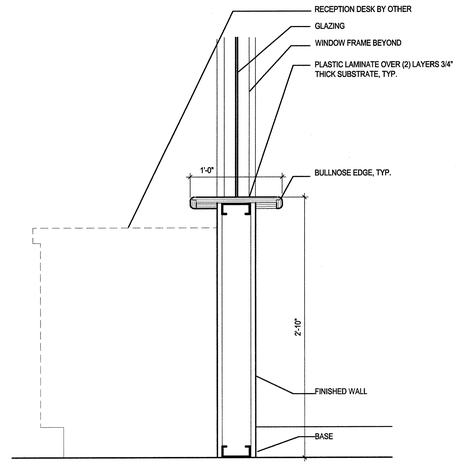


B1 VCT TO CARPET TYPICAL TRANSITION
SCALE: 6" = 1'-0"

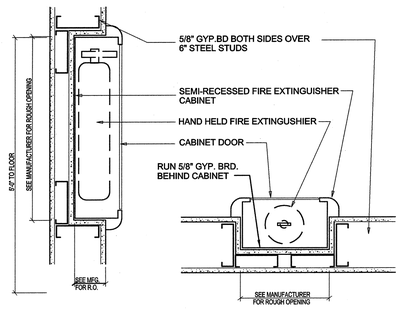


B2 EXISTING CARPET TO NEW CARPET TYPICAL TRANSITION
SCALE: 6" = 1'-0"

B3 NOT USED
SCALE: N/A



B4 ENTRY DESK WITH PASS-THROUGH WINDOW
SCALE: 1 1/2" = 1'-0"

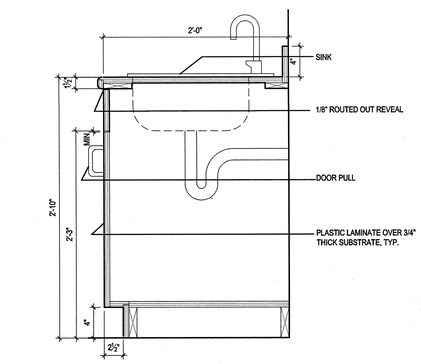


C3 FIRE EXTINGUISHER CABINET
SCALE: 1 1/2" = 1'-0"

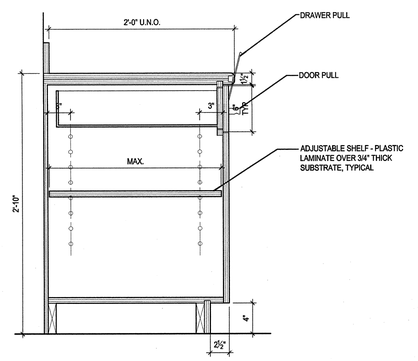
NOTE: RATED ENCLOSURE

C2 PROJECTOR SCREEN
SCALE: 3" = 1'-0"

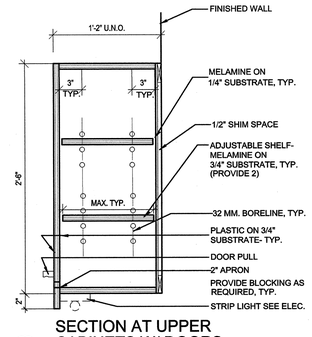
C1 NOT USED
SCALE: N/A



A3 LOWER CABINET W/ SINK
SCALE: 1 1/2" = 1'-0"



A4 SECTION @ BASE CABINET
SCALE: 1 1/2" = 1'-0"



A5 SECTION AT UPPER CABINETS W/ DOORS
SCALE: 1 1/2" = 1'-0"

A1 NOT USED
SCALE: N/A

A2 NOT USED
SCALE: N/A

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INTERIOR DETAILS

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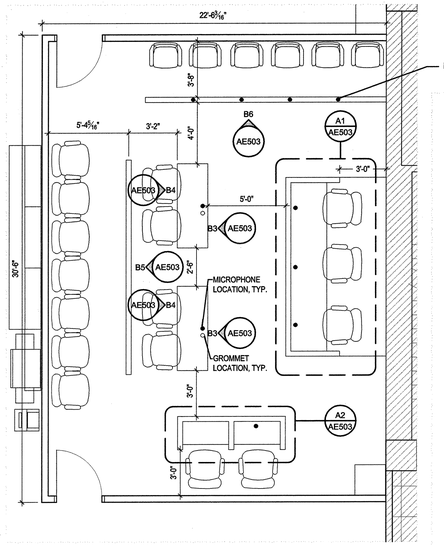
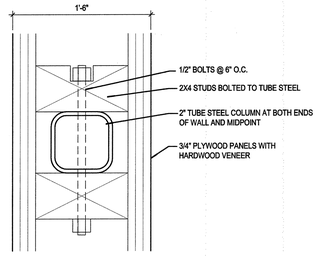
HEARING ROOM ALTERNATE # 1

DFCM Project # 06187310

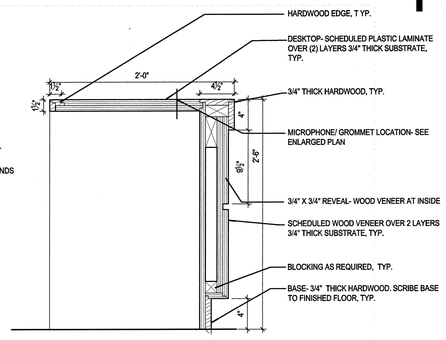
HEBER M. WELLS BUILDING



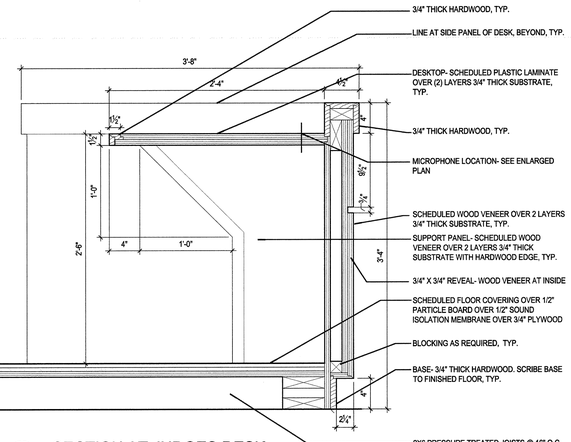
D1 PLAN VIEW AT HEARING ROOM
SCALE: 1/4" = 1'-0"



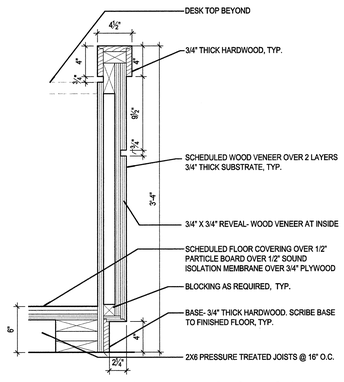
D2 TYPICAL REINFORCEMENT AT JURY BOX (PLAN SECTION)
SCALE: 6" = 1'-0"



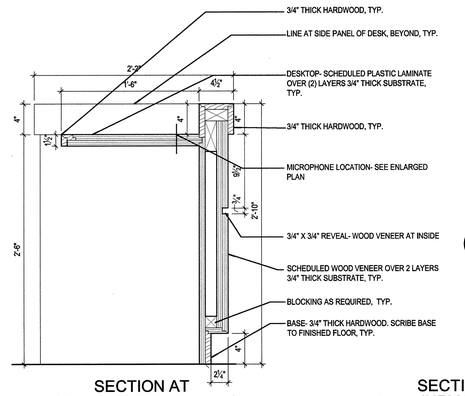
D3 SECTION AT COUNSEL TABLE
SCALE: 1 1/2" = 1'-0"



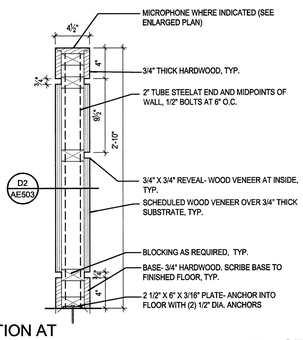
C1 SECTION AT JUDGES DESK
SCALE: 1 1/2" = 1'-0"



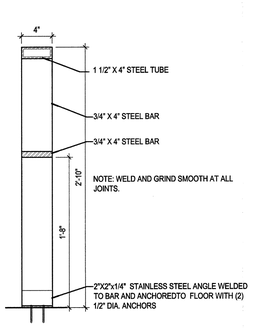
C2 SECTION AT JUDGES DESK
SCALE: 1 1/2" = 1'-0"



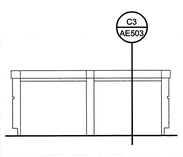
C3 SECTION AT WITNESS/CLERK STAND
SCALE: 1 1/2" = 1'-0"



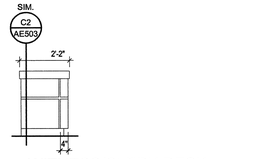
C4 SECTION AT JURY BOX
SCALE: 1 1/2" = 1'-0"



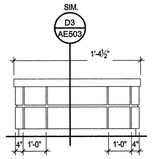
C5 SECTION AT BAR
SCALE: 1 1/2" = 1'-0"



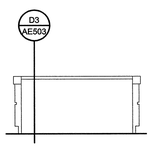
B1 WITNESS/ CLERK DESK
SCALE: 3/8"=1'-0"



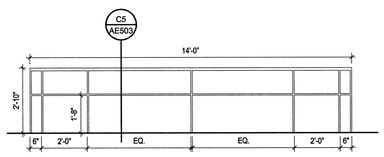
B2 WITNESS/CLERK DESK SIM. AT COUNSEL TABLE
SCALE: 3/8" = 1'-0"



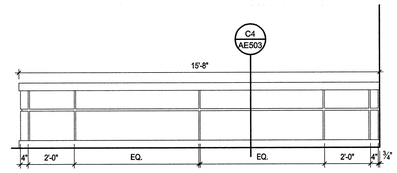
B3 COUNSEL TABLE
SCALE: 3/8" = 1'-0"



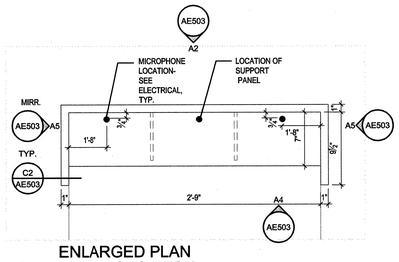
B4 COUNSEL TABLE
SCALE: 3/8" = 1'-0"



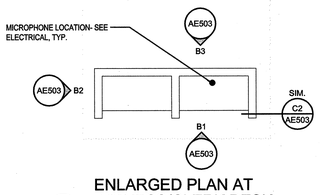
B5 BAR
SCALE: 3/8" = 1'-0"



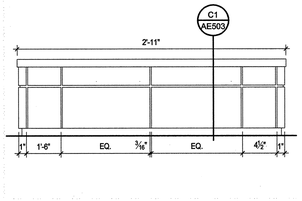
B6 JURY BOX
SCALE: 3/8" = 1'-0"



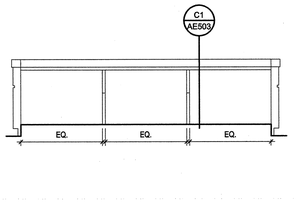
A1 ENLARGED PLAN AT JUDGES DESK
SCALE: 3/8" = 1'-0"



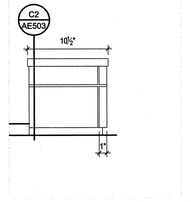
A2 ENLARGED PLAN AT WITNESS/CLERK DESK
SCALE: 3/8" = 1'-0"



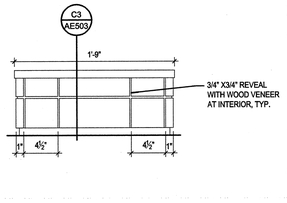
A3 JUDGES DESK
SCALE: 3/8" = 1'-0"



A4 JUDGES DESK
SCALE: 3/8" = 1'-0"



A5 JUDGES DESK
SCALE: 3/8" = 1'-0"



A6 WITNESS/CLERK DESK
SCALE: 3/8" = 1'-0"

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Heber M. Wells Building Remodel
Salt Lake City, Utah
T.I.

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HEARING ROOM
ALTERNATE # 1 DETAILS

AE503

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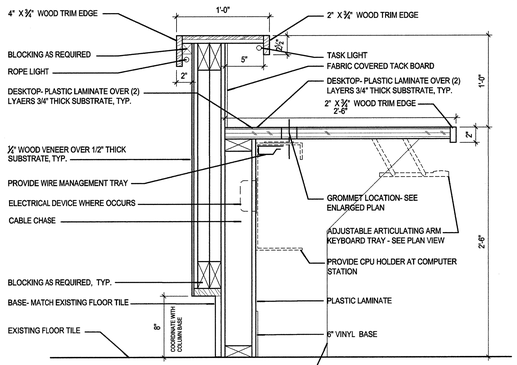
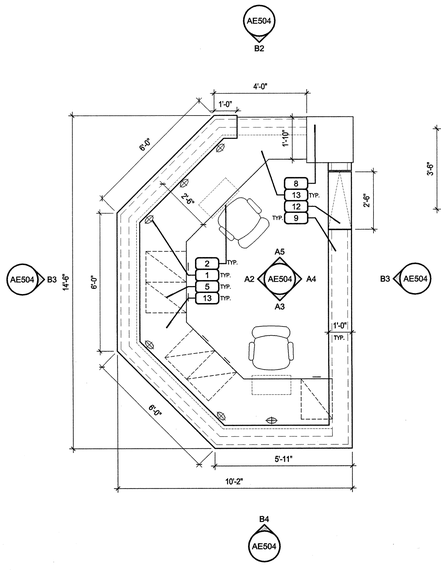
SECURITY KIOSK
ALTERNATE # 2
DFCM Project # 06187310
HEBER M. WELLS BUILDING

KEYED NOTES:

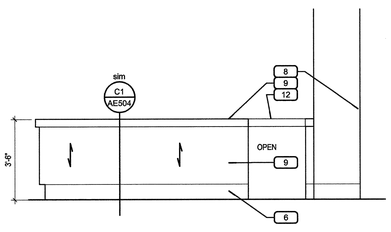
1. GROMMET IN WORKSURFACE
2. ADJUSTABLE ARTICULATING ARM KEYBOARD TRAY
3. OPEN KNEE SPACE
4. FABRIC COVERED TACKBOARD
5. FILE CABINET BY OWNER, FIELD VERIFY / COORDINATE
6. BASE- MATCH EXISTING FLOOR TILE
7. 6" VINYL BASE TYP.
8. EXISTING COLUMN
9. WOOD VENEER TO MATCH EXISTING FINSIHES IN LOBBY
10. SANDBLASTED LOGO ON WOOD VENEER
11. PLASTIC LAMINATE
12. FOLD UP DOOR AT COUNTER
13. PLASTIC LAMINATE TOP WITH WOOD EDGE TRIM



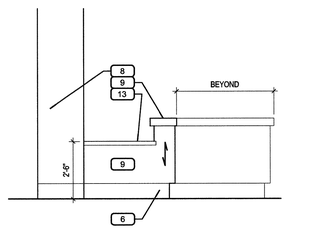
C1 SECTION AT SECURITY KIOSK
SCALE: 1 1/2" = 1'-0"



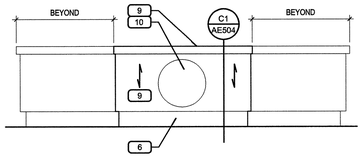
A1 ENLARGED PLAN AT SECURITY KIOSK
SCALE: 3/8" = 1'-0"



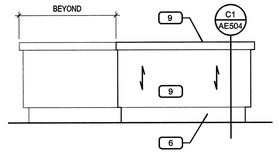
B1 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



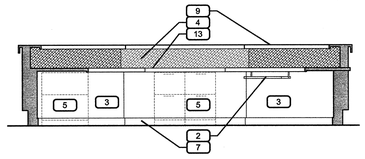
B2 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



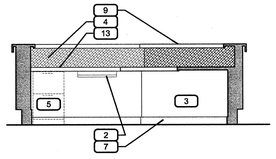
B3 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



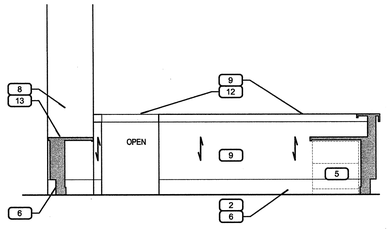
B4 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



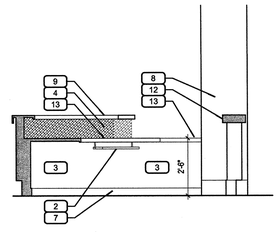
A2 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



A3 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



A4 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"



A5 SECURITY KIOSK ELEVATION
SCALE: 3/8" = 1'-0"

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5/16/06

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah
T.I.

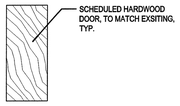
Rev #	Date	Description

Job # 05310
CAD File
Drawn GA Checked GA
Date 05/10/2006
Owner #
Ins. #

SECURITY KIOSK
ALTERNATE # 2 DETAILS

AE504

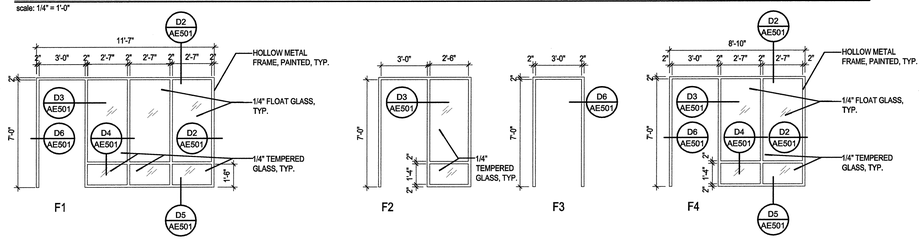
Sheet of Sheets



D1

DOOR TYPE

scale: 1/4" = 1'-0"



FRAME TYPE

scale: 1/4" = 1'-0"

WINDOW TYPE

scale: 1/4" = 1'-0"

DOOR AND FRAME SCHEDULE

DOOR NUMBER	DOOR						FRAME				HARDWARE GROUP	LABEL (HRS)	NOTES
	DOOR TYPE	NEW / EXG / REL	SIZE			MATERIALS	NEW / EXG / REL	ELEVATION	MATERIAL	DETAILS			
			WIDTH	HEIGHT	THICK					SHEET # AE501			
01	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	2	N/R	SECURE DOOR ACCESS
02	NOT	USED											
03	NOT	USED											
04	NOT	USED											
05	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	2	N/R	SECURE DOOR ACCESS
06	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	1	N/R	
06 A	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	1	N/R	
07	NOT	USED											
08	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F1	HM	D3,D6	1	N/R	
09	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	1	N/R	
10	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	1	N/R	
11	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	1	N/R	
12	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	1	N/R	
13	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	1	N/R	
14	NOT	USED											
15	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	1	N/R	
16	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6		N/R	
17	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F4	HM	D3,D6		N/R	
18	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F1	HM	D3,D6		N/R	
19	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F4	HM	D3,D6		N/R	
20	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	2	N/R	
21	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F2	HM	D3,D6	2	N/R	
22	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	1	N/R	
23	D1	N	3'-0"	7'-0"	1-3/4"	SCWD	N	F3	HM	D6	1	N/R	

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah

T.I.

Rev #	Date	Description

Job # 05310
CAD File R:\2005\05235\CD\A1_2
Drawn EZ Checked PB
Date 05/10/2006
Owner #
Ins. #

DOOR SCHEDULE

AE600

Sheet of Sheets

GENERAL STRUCTURAL NOTES

GENERAL

1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
2. Typical details and sections shall apply where specific details are not shown.
3. The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any effected elements.
4. Changes to these contract drawings may be made only by an authorized representative of Dunn Associates Inc. Dunn Associates Inc. shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of Dunn Associates Inc.
5. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
6. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk.
7. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer.
8. The contractor shall be responsible for means, methods, techniques, sequences, and procedures in order to comply with the contract drawings and specifications. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the floor/roof system is completed.
9. Site observations by Dunn Associate's field representative shall not be construed as approval of construction, the procedures nor special inspection.
10. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. Most dimensions and most non-structural elements such as elevations, depressions, slopes, mechanical housekeeping pads, etc. are not shown in the structural drawings. See the Architectural Drawings for dimensions, doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, etc.
11. Review of shop drawing submittals by Dunn Associates Inc's is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents.
12. Shop drawings made from reproductions of the structural drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed. The contractor may also obtain electronic files of the plan sheets after signing a release agreement. Electronic files of the detail sheets and schedule sheets will not be made available.

BASIS OF DESIGN

1. Governing Building Code — International Building Code 2003
2. Floor Live Load
   a. Uniformly Distributed Loads
      i. Offices — 80 psf
      ii. Lobbies & Main Floor Corridors — 100 psf
      iii. Corridors Above Main Floor — 80 psf
   b. Concentrated Loads
      i. All Areas — 2000 lbs
3. Roof Live Load* — 20 psf
   *(Not concurrent with Roof Snow Load)
4. Roof Snow Load
   a. Ground Snow Load — P_g = 43 psf
   b. Flat Roof Snow Load — P_f = 30 psf
   c. Snow Exposure Factor — C_e = 1.0
   d. Snow Load Importance Factor — I_s = 1.0
   e. Thermal Factor — C_t = 1.0
5. Wind Load
   a. No wind resisting elements modified.
6. Earthquake Design Data
   a. No seismic force resisting elements modified.
7. Serviceability Criteria
   a. Beam Non-Composite Superimposed Load Deflection
      i. Interior — L/360
   b. Beam Post-Composite Superimposed Load Deflection
      i. Interior — L/360

CONCRETE

1. Materials, unless noted otherwise:
   a. Normal Weight aggregates — ASTM C 33
   b. Light Weight aggregates — ASTM C 330
   c. Light Weight concrete shall not exceed 110 (± 3) pounds per cubic foot.
   d. Fly Ash, Class F Pozzolan — ASTM C618
   e. Reinforcing Steel — ASTM 615 Grade 60 (Fy = 60 ksi)
   f. Deformed Bar Anchors (DBA) — ASTM A496
   g. Headed Stud Anchors (HSA) — ASTM A108
   i. Anchor Bolts
      i. All Columns UNO — ASTM F1554 Gr. 36 (equiv to A36 or A307) with ASTM A563 heavy hex nuts with hardened washers Grade A.
      ii. Braced Frame/Moment Frame Columns UNO
          ASTM F1554 Gr. 55 (equiv to A572 Gr. 55)
          ASTM F1554 Gr. 105 (equiv to A193 Gr. B7) with ASTM A563 heavy hex nuts with ASTM F436 minimum 5/16" thick washers.
   j. Admixtures:
      Air-entraining admixtures shall comply with ASTM C 260 (when used).
      Calcium chloride shall not be added to the concrete mix. Unreinforced concrete slabs on grade may have calcium chloride not exceeding one percent.
   k. Type I/II cement complying with ASTM C-150 shall be used for all concrete.
   l. The water/cement ratio for concrete 4000 psi and greater shall not exceed 0.50 (grout mixes are excluded).
   m. The slump of all concrete shall be limited to 4" unless plasticizers are used.
   n. Provide air entraining as recommended by ACI 318.
   o. Air entrainment shall be adjusted for the use of admixtures and fly ash.
   p. Fly Ash shall be a maximum of 20% of the cementitious material.
   q. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.
2. Compressive strengths of concrete at 28 days shall be as follows:
   a. Light Weight concrete over Steel Deck .... 3000 psi
3. 2-1/2" thick (4-1/2" overall) light weight concrete slab shall be poured over the steel deck. Reinforce slab with 6" x 6" – W1.4xW1.4 welded wire fabric minimum, unless noted otherwise. Welded Wire Fabric shall be placed 1" to 1-1/2" below the top of the slab.
4. The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores.
   a. Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement.
   a. Suspended slabs shall be re-supported after form removal until concrete reaches its 28-day specified compressive strength.
5. Reinforcement shall have the following concrete cover:
   Cast-in-place Concrete: — Clear Cover
   a. Cast against and permanently exposed to earth .... 3"
   b. Formed concrete exposed to earth or weather:
      #6 thru #18 bars .... 2"
      #5 and smaller bars .... 1-1/2"
   c. Concrete not exposed to weather or in contact with ground:
      Slabs, Walls, Joists; #11 bars and smaller .... 3/4"
      Beams, Columns: Primary Reinf., Ties, Stirrups, Spirals .... 1-1/2"
   Concrete Tilt-up Panels (manufactured under plant-controlled conditions)
      #8 and smaller .... 1"
      #9 thru #18 .... 1-1/2"
   Pre-cast Concrete: — Clear Cover
   a. Concrete exposed to earth or weather:
      i. Wall Panels
         #6 and smaller .... 3/4"
         #14 and #18 bars .... 1-1/2"
      ii. Other members.
         #11 and smaller .... 1 1/2"
         #14 and #18 bars .... 2"
   b. Concrete not exposed to weather or in contact with ground:
      Slabs, Walls, Joists; #11 bars and smaller .... 5/8"
      Beams, Columns: Primary Reinf. .... 1-1/2"
      Ties, Stirrups, Spirals .... 3/8"
6. Construction Joints and Control Joints:
   a. Provide a beveled 2 x 4 x intermediate keyway that shall be installed in all horizontal and vertical construction joints including between top of footing and foundation walls. In addition, all joints shall be intentionally roughened to a full amplitude of approximately 1/4 inch.
   b. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. Control joints may be installed by:
      i. Saw cut a depth of 1/4 the thickness of the slab
      ii. Tooled joints a depth of 1/4 the thickness of the slab
   c. Install construction or control joints in slabs on grade at a spacing not to exceed 30 times the slab thickness in any direction, unless noted otherwise. Construction joints shall not exceed a distance of 125'-0" o.c. in any direction.
7. Construction
   a. Use chairs or other support devices recommended by the CRSI to support bar and tie reinforcement bars and WWF prior to placing concrete. WWF shall be continuously supported at 36" o.c. maximum. Reinforcing steel for slabs on grade shall be adequately supported on precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
   b. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
   c. All embeds and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
   d. No pipes, ducts, sleeves, etc. shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around these elements and footings stepped to avoid piping.
   e. Reinforcing Bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs.
8. Detailing:
   a. Lap lengths shall be as follows:
      i. #3 = 15"   #6 = 30"
         #4 = 20"   #7 = 35"
         #5 = 25"   #8 = 40"
      ii. Do not splice stirrups and ties.
      iii. Do not splice vertical bars in retaining walls unless specifically shown.
   b. Lap splice lengths shall be detailed to comply with the "Reinforcing Bar Lap Splice Schedule" contained within the contract drawings. Splices may be made with mechanical splices capable of 125% tension capacity of the bar being spliced. Mechanical splices shall be the positive connecting type coupler and shall meet all ACI requirements. Use "Cadweld", "Lenton" Standard Couplers, "Bar-Lock" or equal with internal protector. If mechanical splices are used, splices or couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.
   c. At joints provide reinforcing dowels to match the member reinforcing, unless noted otherwise.
   d. At all discontinuous control or construction slab on grade joints, provide 2 - #4 x 48 inches.
   e. Provide corner bars at intersecting wall corners using the same bar size and spacing as the horizontal wall reinforcing.
   f. All vertical reinforcing shall be doweled to footings, or to the structure below with the same size and spacing as the vertical reinforcing for the element above. Dowels extending into footings shall terminate with a 90 degree standard hook and shall extend to within 4" of the bottom of the footing. Footing dowels (#8 bars and smaller) with hooks need not extend more than 20" into footings.
   g. Scheduled concrete shearwalls, the horizontal wall reinforcing shall terminate at ends of walls and openings into the far end of the jamb column with a 90-degree standard hook plus a 6 bar diameter extension. Horizontal wall reinforcing shall be continuous through construction and control joints.
   h. See detail _________ for reinforcing around miscellaneous openings (8" to 36" wide). For openings wider than 36", contact the engineer. All recesses that interrupt reinforcing shall be reinforced the same as an opening.

STRUCTURAL STEEL

1. Material:
   a. Wide Flange Sections — ASTM A992 (50 ksi)
   b. Other shapes & Plates — ASTM A36
   c. Pipe Columns — ASTM A53, Types E or S, Grade B.
   d. Steel Tubes — ASTM A500 Grade B (46KSI)
   e. Deformed Bar Anchors (DBA) — ASTM A496
   f. Headed Stud Anchors (HSA) — ASTM A108
   g. Anchor Bolts
      i. All Columns UNO — ASTM F1554 Gr. 36 (equiv to A36 or A307) with ASTM A563 heavy hex nuts with hardened washers Grade A.
      ii. Braced Frame/Moment Frame Columns UNO
          ASTM F1554 Gr. 55 (equiv to A572 Gr. 55)
          ASTM F1554 Gr. 105 (equiv to A193 Gr. B7) with ASTM A563 heavy hex nuts with ASTM F436 minimum 5/16" thick washers.
   h. Bolted Connections: — ASTM A325
   i. Non-Shrink Grout — ASTM C1107 Grade B
   j. Non-shrink grout shall be prepackaged, non-metallic and non-gaseous with a fluid consistency (flow cone) of 20 to 30 seconds. Grout shall be bleed free and attain 7,500 psi compressive strength in 28 days of fluid consistency. Certified independent test data required.
   k. Steel shapes in Groups 3 (with flanges 1 ½"or thicker), 4 and 5 and plates which are a part of the Moment Resisting Frames (MRF) shall be tested to verify these members have Charpy CVN values of 20 ft-lbs or greater at 70 degrees Fahrenheit.
2. Fabrication and construction shall comply with the latest edition of the following Codes and Standards:
   a. American Institute of Steel Construction (AISC), "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings," with "Commentary".
   b. AISC "Code of Standard Practice" excluding the following: Section 3.4, Section 4.4, Section 4.4.1.
   c. AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
   d. American Welding Society (AWS), Structural Welding Code (specific items do not apply when they conflict with the AISC requirements).
   e. AISC "Seismic Provisions for Structural Steel Buildings."
3. Welding
   a. All welding and cutting shall be performed by AWS certified welders.
   b. Use E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof decks. All electrodes shall be low hydrogen type.
   c. All intersecting steel shapes which are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Where fillet weld sizes are not shown they shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected part.
   d. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors (DBAs), structural bolts, or headed stud anchors(HSAs).
   e. Do not weld anchor bolts, including "tack" welds.
   f. Headed Stud Anchors (HSAs) welding and deformed bar anchor welding shall conform to the manufacturer's specifications.
4. Bolted Connections:
   a. Snug Tightened Bolts. Use ASTM A325N bolts for steel to steel connections, as noted herein or as noted on the drawings. A325N bolts shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. Tighten bolts to a snug tight condition. TC bolts are acceptable.
   b. Use hardened washers beneath the turned element of all bolts or nuts. Use hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. At oversized holes hardened washers or plates shall conform with ASTM F-436 and shall completely cover the slot after installation. Where A490 bolts are specified, provide hardened washers beneath both the head and the nut, as required by AISC.
   c. Where a steel to steel beam connection is not shown, provide a standard AISC framed connection for one half the total uniform load capacity of the beam for the span and steel specified.
   d. Bolts, nuts and washers shall not be reused.
5. Provide full-depth web-stiffener plates at each side of all beams at all bearing points. Stiffener plates shall be the thickness called out below unless noted otherwise and shall be welded both sides with fillet welds all around:

FLANGE WIDTH	STIFFENER THICKNESS	WELD SIZE
Less than 8 1/4"	1/4"	3/16"
8 1/4" to 12 1/4"	3/8"	1/4"
12 1/4" to 16 1/2"	1/2"	5/16"
16 1/2" to 20 3/4"	5/8"	3/8"

METAL DECKING

1. Steel deck shall comply with the latest requirements of the Steel Deck Institute.
2. All deck shall be 3-span continuous minimum. In areas where 3-span conditions are not possible, the contractor shall provide heavier gauge deck as required to provide the equivalent loading of the deck under a three span condition.
3. Steel roof deck shall not be used to support loads from plumbing, HVAC ducts, light fixtures, architectural elements or equipment of any kind, unless specifically noted.
4. All deck supporting members shall be dry before welding.
5. Crimp seams before button punching or welding interlocking seams.
6. Where deck is to receive sprayed-on fire proofing, painted deck shall be coated with special paint that will allow the sprayed-on fire proofing to adhere to the painted deck.
7. All welds performed on the steel deck are to be painted.

Steel Floor Deck

a. Steel floor deck shall be 2" deep X 20 gauge minimum phosphatized/painted composite type "W" deck with interlocking side seams with the following properties:

	22 Gauge	20 Gauge	18 Gauge
Minimum S (in^3/ft) =	0.283	0.361	0.510
Minimum I (in^4/ft) =	0.340	0.423	0.555

Deck shall be galvanized (G60) when used above or below mechanical equipment rooms.

a. Weld deck to supporting framing members with 3/4" diameter puddle welds at the following spacing (Closer spacings may be used to develop minimum shear requirements.):
   i. 12" o.c. to supports perpendicular to deck corrugations (4 welds per 36" wide sheet).
   ii. 12" o.c. to all supports parallel to deck corrugations.
b. Attach interlocking seams with 3/16" Ø button punch at 18" o.c. or 1 1/2" top seam weld at 36" o.c. between adjacent pieces of deck. Closer spacings may be used to develop minimum shear requirements.
c. Provide a 2-inch minimum bearing at supports.
d. Butt all end splices.

SPECIAL INSPECTION

Special inspection, as required by section 1704 of the IBC, shall be provided by an independent agency employed by the owner unless waived by the building official. The contractor shall coordinate and cooperate with the required inspections. All testing and inspection reports shall be sent to the engineer for review.

Items requiring special inspection are:

1. Special Inspection of Concrete placement is required (IBC Section 1704.4)
2. Special Inspection of Concrete reinforcing steel placement is required (IBC Section 1704.4)
3. Special Inspection of Structural welding, including steel deck is required (IBC 1704.3)
4. Special Inspection of High Strength bolted connections is required (IBC Section 1704.3.3)

LEGEND OF MARKS AND ABBREVIATIONS

Mark	Meaning	Mark	Meaning
AB	ANCHOR BOLT(S)	MFR	MANUFACTURER
ABV	ABOVE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
APPROX	APPROXIMATE		
ARCH	ARCHITECT(URAL)	NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
BLDG	BUILDING		
BLW	BELOW	O.C.	ON CENTER
BM	BEAM	O.F.	OUTSIDE FACE
BOT	BOTTOM	OPNG	OPENING
BRG	BEARING	OPP	OPPOSITE
BTWN	BETWEEN	OSB	ORIENTED STRAND BOARD
CC.	CENTER TO CENTER	PCF	POUNDS PER CUBIC FOOT
C.J.	CONST OR CONTROL JOINT	PHD	PRE-DEFLECTED HOLDOWN
CMU	CONCRETE MASONRY UNIT	PFT	PREFABRICATED TRUSS
COL	COLUMN	PL	PLATE
CONC	CONCRETE	PLF	POUNDS PER LINEAL FOOT
CONST	CONSTRUCTION	PNL	PANEL
CONT	CONTINUOUS	PSF	POUNDS PER SQUARE FOOT
CONTR	CONTRACTOR	PSI	POUNDS PER SQUARE INCH
CS	COIL STRAP	PT	POINT
CTR	CENTER		
		REINF	REINFORCING
DB	DECK BEARING	REQ'D	REQUIRED
DBA	DEFORMED BAR ANCHOR	R.D.	ROOF DRAIN
DBE	DECK BEARING ELEVATION		
DBL	DOUBLE	SAD	SEE ARCHITECTRAL DRAWINGS
DET	DETAIL	SCW	SEISMIC CRITICAL WELD
DIA	DIAMETER	SHT	SHEET
DIM	DIMENSION	SI	SPECIAL INSPECTION
DN	DOWN	SIM	SIMILAR
DWG	DRAWING	SOG	SLAB ON GRADE
DWL	DOWEL	SQ	SQUARE
		STAG	STAGGERED
EA	EACH	STD	STANDARD
E.F.	EACH FACE	STIFF	STIFFENER
E.J.	EXPANSION JOINT	STL	STEEL
ELEC	ELECTRICAL	STR	STRUCTURAL
ELEV	ELEVATION	STS	SELF TAPPING SCREWS
EN	EDGE NAIL		
EQUIP	EQUIPMENT	T&B	TOP AND BOTTOM
EQ	EQUAL	TEMP	TEMPERATURE
E.W.	EACH WAY	THDS	THREADS
EXIST	EXISTING	T.O.	TOP OF
EXP	EXPANSION	TOC	TOP OF CONCRETE
EXT	EXTERIOR	TOD	TOP OF DECK
		TOF	TOP OF FOOTING
FDN	FOUNDATION	TOS	TOP OF STEEL
F.F.	FINISH FLOOR	TOW	TOP OF WALL
FIN	FINISH FLOOR	TYP	TYPICAL
FL	FLOOR		
FT	FOOT	UBC	UNIFORM BUILDING CODE
FTG	FOOTING	UNO	UNLESS NOTED OTHERWISE
GA	GAUGE	VERT	VERTICAL
GALV	GALVANIZED		
GLB	GLUE LAMINATED BEAM	W/	WITH
GR	GRADE	WWF	WELDED WIRE FABRIC
GSN	GENERAL STRUCTURAL NOTES	WWM	WELDED WIRE MESH
HB	HORIZONTAL BRIDGING		
HD	HOLDOWN		
HORIZ	HORIZONTAL		
HSA	HEADED STUD ANCHOR		
HT	HEIGHT		
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS		
IBC	INTERNATIONAL BUILDING CODE		
I.F.	INTERIOR FACE		
IN.	INCH		
INSUL	INSULATION		
INT	INTERIOR		
JT	JOINT		
JST	JOIST		
K	KIP(S) = 1000 POUNDS		
KLF	KIPS PER LINEAL FOOT		
KSF	KIPS PER SQUARE FOOT		
LBS	POUNDS		
LF	LINEAL FOOT		
LSL	LAMINATED STRAND LUMBER		
LVL	LAMINATED VENEER LUMBER		
MAS	MASONRY		
MAX	MAXIMUM		
MCJ	MASONRY CONTROL JOINT		
MC-x	MASONRY COLUMN MARK		
MECH	MECHANICAL		

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Rev # Date Description

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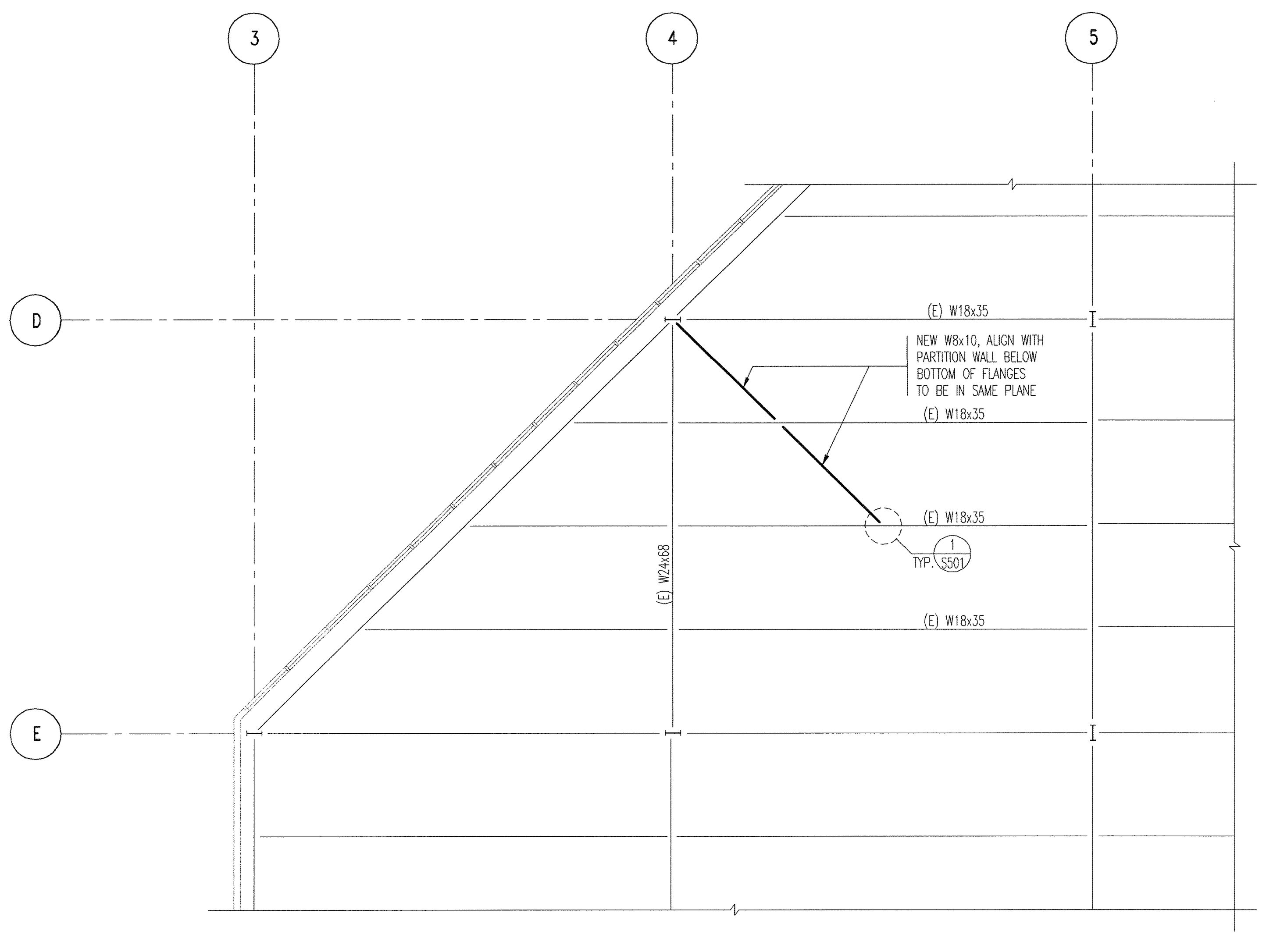
Job # 05310
CAD File
Drawn Checked
Date 05/10/2006
Owner #
Ins. #

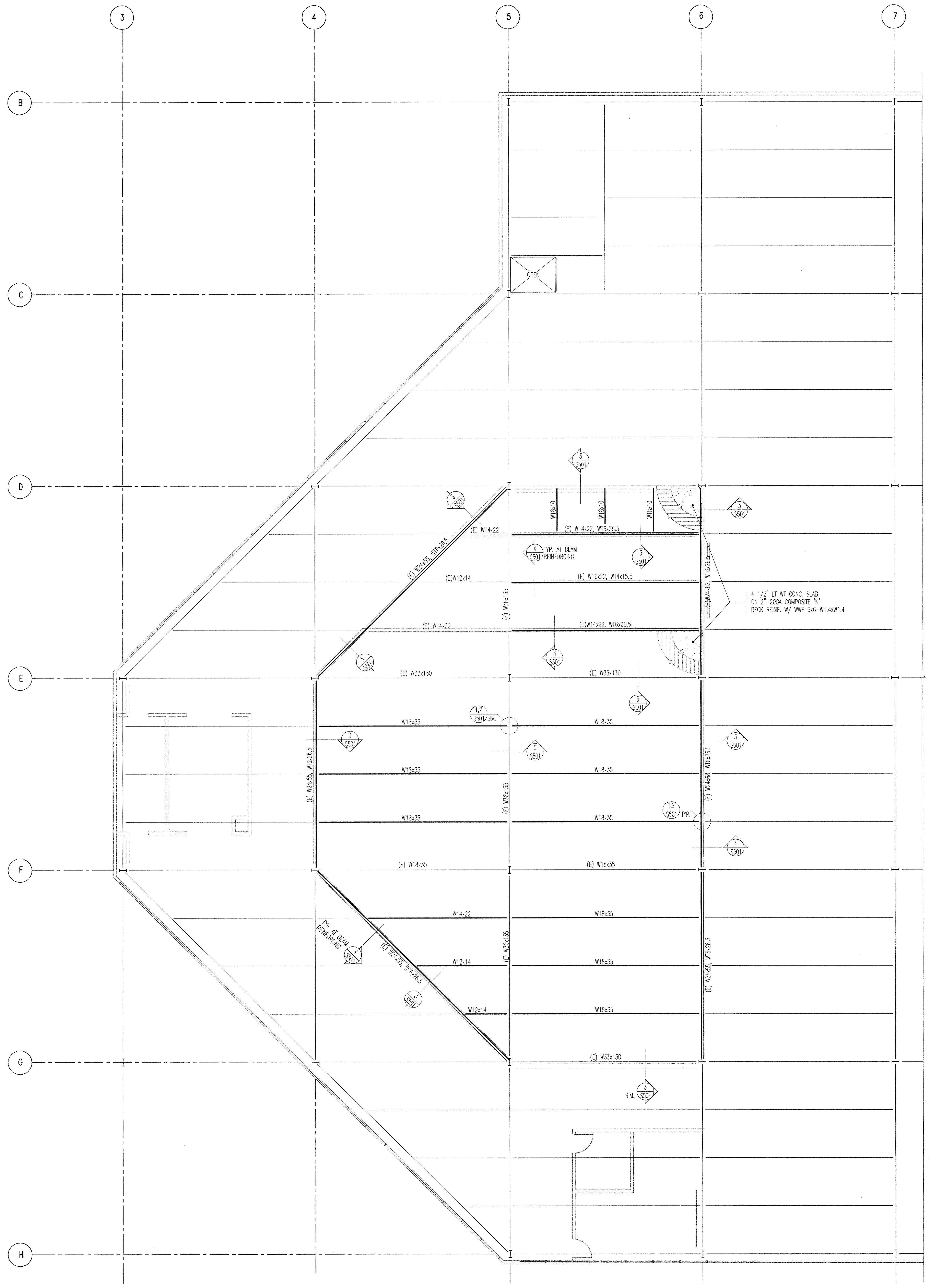
GENERAL STRUCTURAL NOTES

S101

Sheet of Sheets



LEVEL THREE: PARTIAL FLOOR FRAMING PLAN



LEVEL TWO: PARTIAL REMODLE FLOOR FRAMING PLAN

PLAN NOTES:

1. THE INFORMATION SHOWN IS TO BE FIELD VERIFIED. IT SHOULD BE ANTICIPATED THAT ADJUSTMENTS WILL BE NECESSARY.
2. THE CONTRACTOR SHALL VERIFY THESE DRAWINGS WITH EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY OF INCONSISTENCIES BETWEEN THE DRAWINGS AND ACTUAL CONDITIONS BEFORE PROCEEDING WITH DEMOLITION OR CONSTRUCTION.
3. THE CONTRACTOR SHALL ALSO NOTIFY THE OWNER IMMEDIATELY IF ANY WORK INDICATED IN THE CONTRACT DOCUMENTS CANNOT BE PERFORMED DUE TO EXISTING FIELD CONDITIONS.
4. IF ANY EXISTING FIRE PROOFING OR FIRE ASSEMBLIES ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION, THEY SHALL BE REPAIRED TO CONFORM TO ORIGINAL FIRE PROTECTION REQUIREMENTS.
5. REMOVE EXISTING CONSTRUCTION AS INDICATED. TYPICAL WALL REMOVAL INCLUDES FINISHES AND MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS CONTAINED THEREIN. REMOVE DOORS, CASEWORK, WINDOWS, FRAMES AND OTHER FIXTURES AS REQUIRED. AFTER REMOVAL, PATCH HOLES IN EXISTING FLOORS AND WALLS TO REMAIN TO MEET ORIGINAL FIRE PROTECTION AND STRUCTURAL REQUIREMENTS.
6. THE CONTRACTOR SHALL NOT CUT STRUCTURAL WORK IN A MANNER RESULTING IN A REDUCTION OF LOAD CARRYING CAPACITY OR LOAD/DEFLECTION RATIO. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ALL STRUCTURAL CUTS PRIOR TO EXECUTION SO THAT APPROVAL CAN BE OBTAINED.
7. THE CONTRACTOR SHALL REPLACE OR REPAIR ANY DAMAGE TO EXISTING FINISHES WHICH ARE TO REMAIN (I.E. CEILING GRID, CEILING TILE, WALL COVERINGS, FLOOR COVERINGS, ECT).

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LEVEL 2: PARTIAL REMODEL FLOOR FRAMING PLAN
LEVEL 3: PARTIAL FLOOR FRAMING PLAN

S201

Sheet of Sheets

A-325 BOLT SCHEDULE

MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	A-325N BOLTS	
	No. PER BEAM	SIZE
W8	2	7/8" DIA
W10	2	7/8" DIA
W12	3	7/8" DIA
W14	3	7/8" DIA
W16	4	7/8" DIA
W18	5	7/8" DIA
W21	6	7/8" DIA
W24	7	7/8" DIA
W27	8	7/8" DIA
W30	9	7/8" DIA

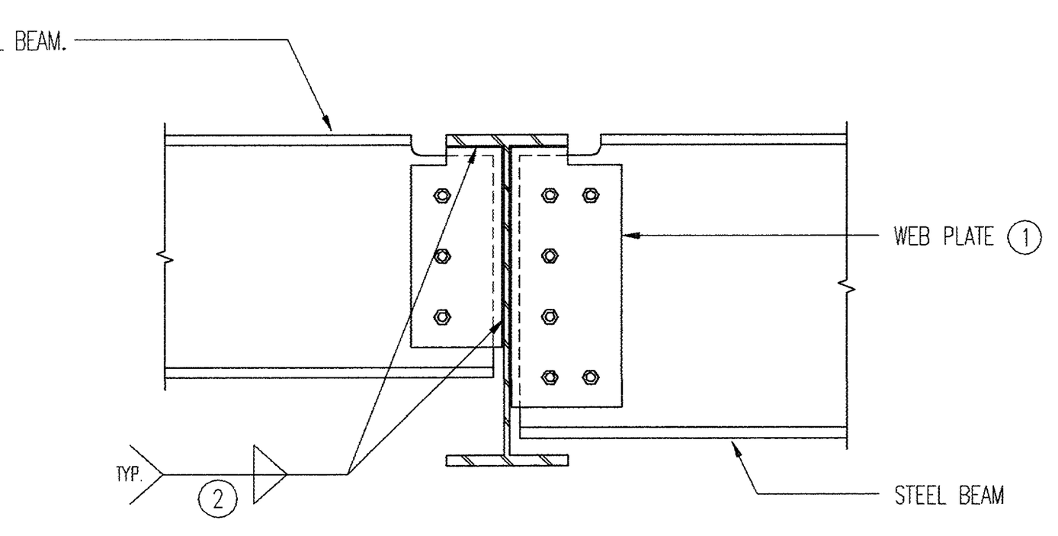
(1) BEAM WEB CONNECTION PLATES. THICKNESS EQUALS THE BEAM WEB THICKNESS PLUS 1/8" (3/8" MIN.)

(2) FILLET WELDS SHALL BE AS FOLLOWS:
ONE SIDE: PLATE THICKNESS MINUS 1/16" (1/4" MIN.)
TWO SIDES: 1/2 PLATE THICKNESS PLUS 1/16" (1/4" MIN.) EACH SIDE

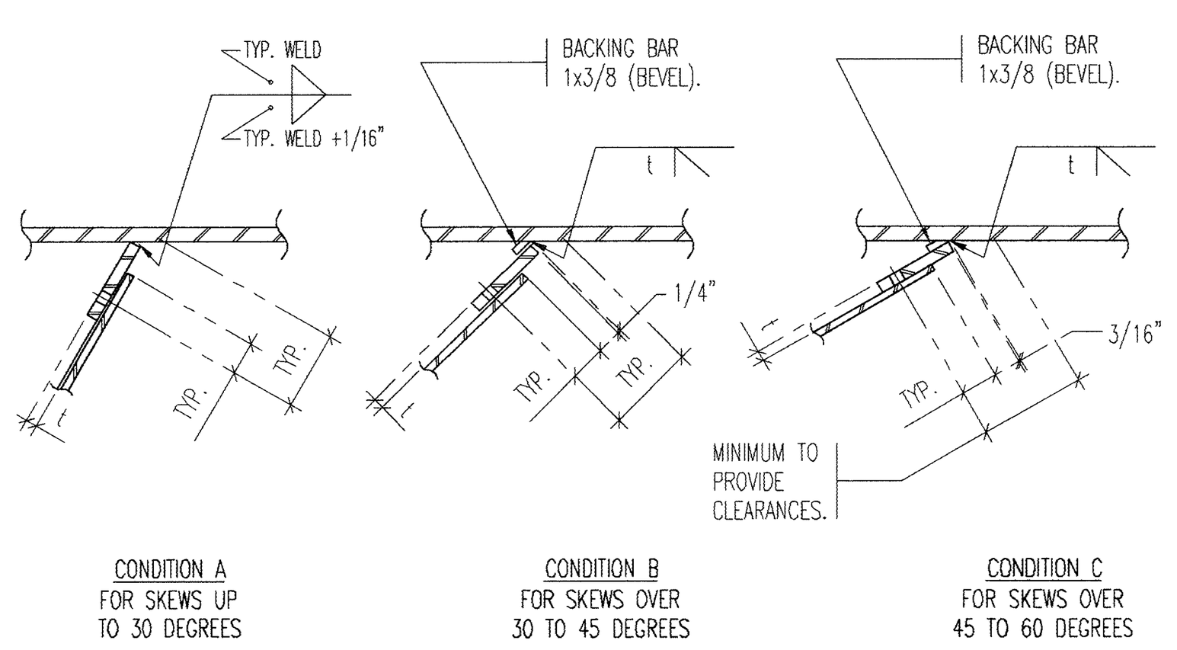
(3) THICKNESS EQUALS BEAM FLANGE THICKNESS OF BEAM FRAMING INTO COLUMN WEB (3/8" MIN.)

(4) BOLT EDGE DISTANCE SHALL BE 1.1/2" MIN. AT ALL EDGES. BOLT SPACING SHALL BE 3" MIN.

(5) WHEN MORE THAN ONE ROW OF BOLTS IS NEEDED, THE FIRST ROW SHALLL BE A COMPLETE ROW WITH THE REMAINDER OF THE BOLTS PLACED IN THE SECOND ROW.



BEAM TO BEAM WEB PLATE CONNECTION



SHEAR CONNECTOR PLATES AT SKEWED MEMBERS

(1) TYPICAL BOLTED WEB PLATE CONNECTIONS WITH BOLT SCHEDULE (SINGLE SHEAR)

NO SCALE

A-325 BOLT SCHEDULE

MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	A-325N BOLTS	
	No. PER BEAM	SIZE
W8	2	7/8" DIA
W10	2	7/8" DIA
W12	3	7/8" DIA
W14	3	7/8" DIA
W16	4	7/8" DIA
W18	4	7/8" DIA
W21	5	7/8" DIA
W24	5	7/8" DIA

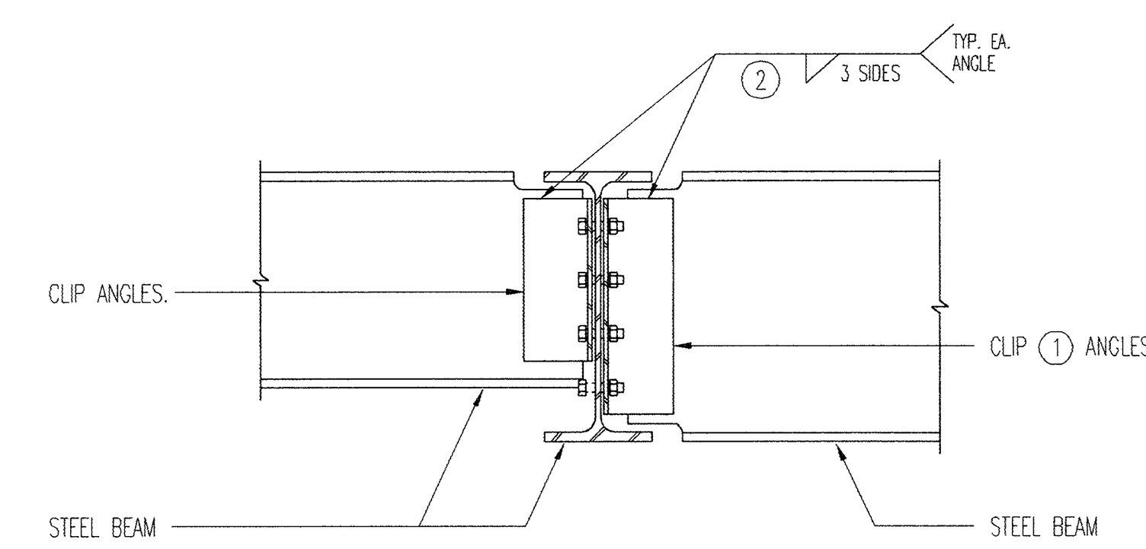
(1) CLIP ANGLES: (2) L4x3 1/2. THICKNESS SHALL BE EQUAL TO ONE HALF THE BEAM WEB THICKNESS PLUS 1/16" (1/4" MIN.). FOR TWO ROWS OF BOLTS OR SKEWED CONNECTIONS, USE BENT PLATES. WHERE COLUMN WIDTH IS SMALLER THAN THE CONNECTING CLIP ANGLES, ANGLE LEGS MAY BE REDUCED TO MATCH WIDTH OF COLUMN. USE L4x4 ANGLES AT BEAM TO CONCRETE WALL OR COLUMN CONNECTIONS.

(2) FILLET WELDS SHALL BE ANGLE THICKNESS MINUS 1/16" (1/4" MIN.).

(3) CONTRACTOR HAS OPTION TO BOLT CLIP ANGLES IN EITHER BEAM WEB IN BEAM TO BEAM CONNECTIONS AND IN COLUMN WEB AND FLANGE.

(4) BOLT EDGE DISTANCE SHALL BE 1 1/2" MIN. AT ALL BEAM AND CLIP ANGLE EDGES. BOLT SPACING SHALL BE 3" O.C. MIN.

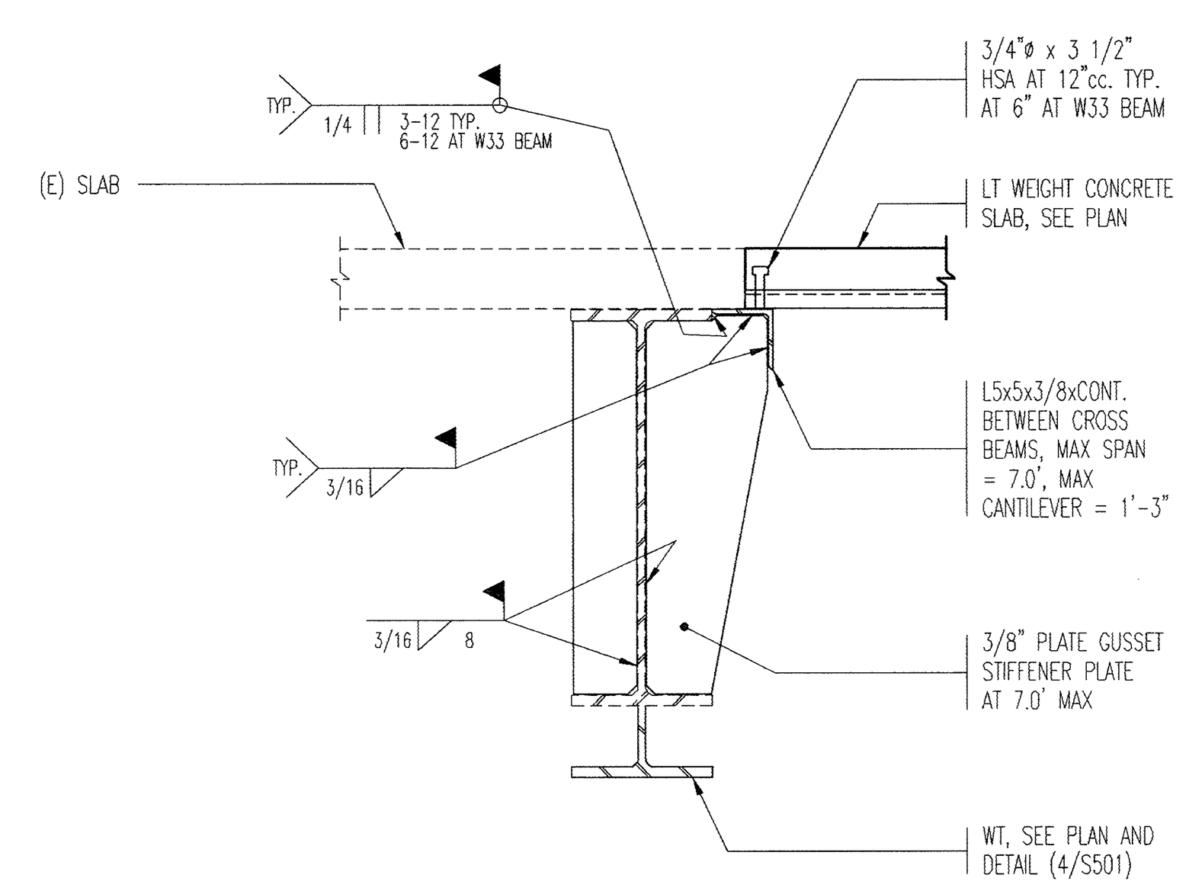
(5) WHEN MORE THAN ONE ROW OF BOLTS IS NEEDED, THE FIRST ROW SHALLL BE A COMPLETE ROW WITH THE REMAINDER OF THE BOLTS PLACED IN THE SECOND ROW.



BEAM TO BEAM CLIP ANGLE CONNECTION

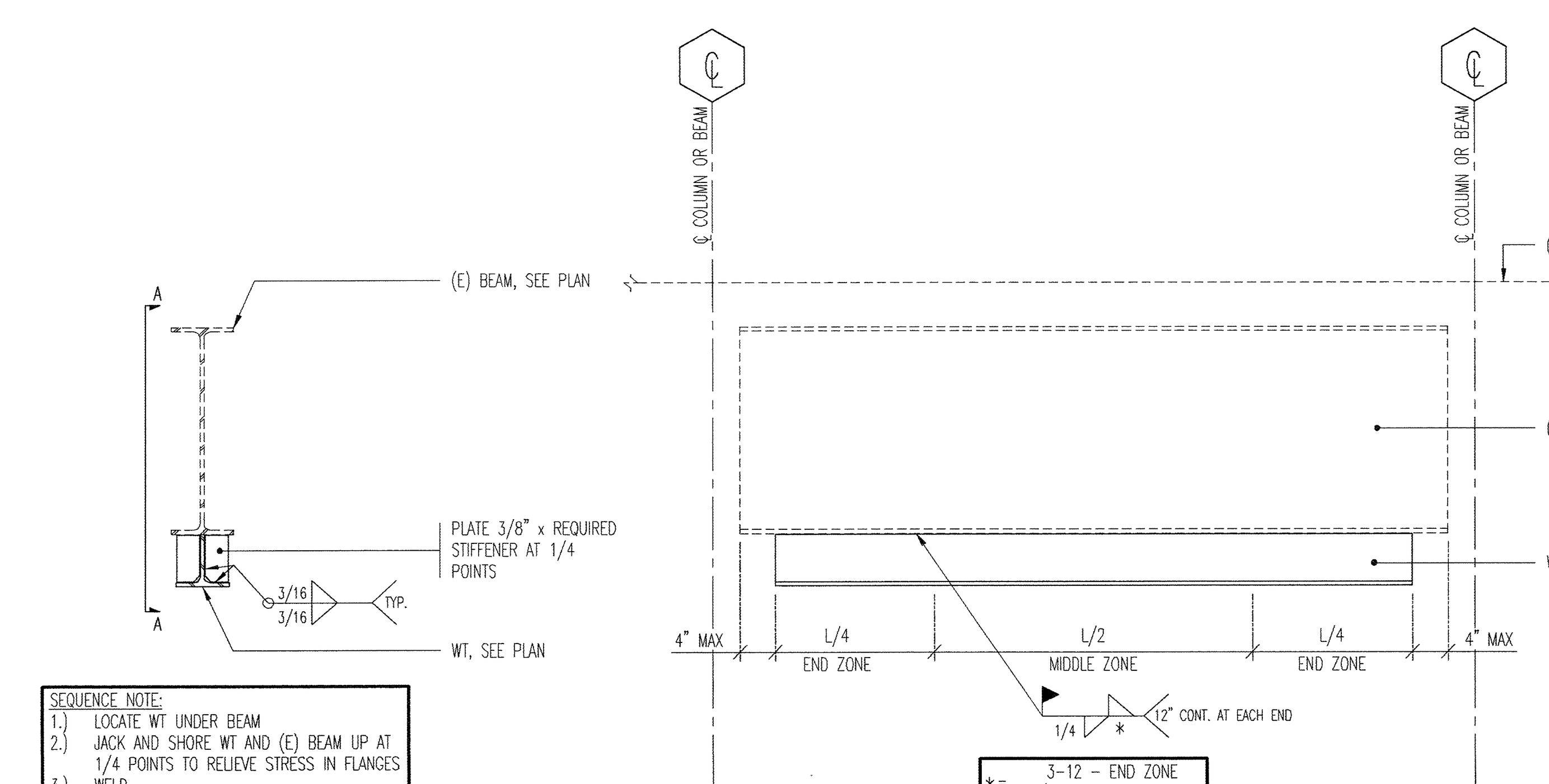
(2) TYPICAL BOLTED CLIP ANGLE CONNECTIONS WITH BOLT SCHEDULE (DOUBLE SHEAR)

NO SCALE



(3) NEW DECK TO OLD, TYPICAL CONDITION

NO SCALE

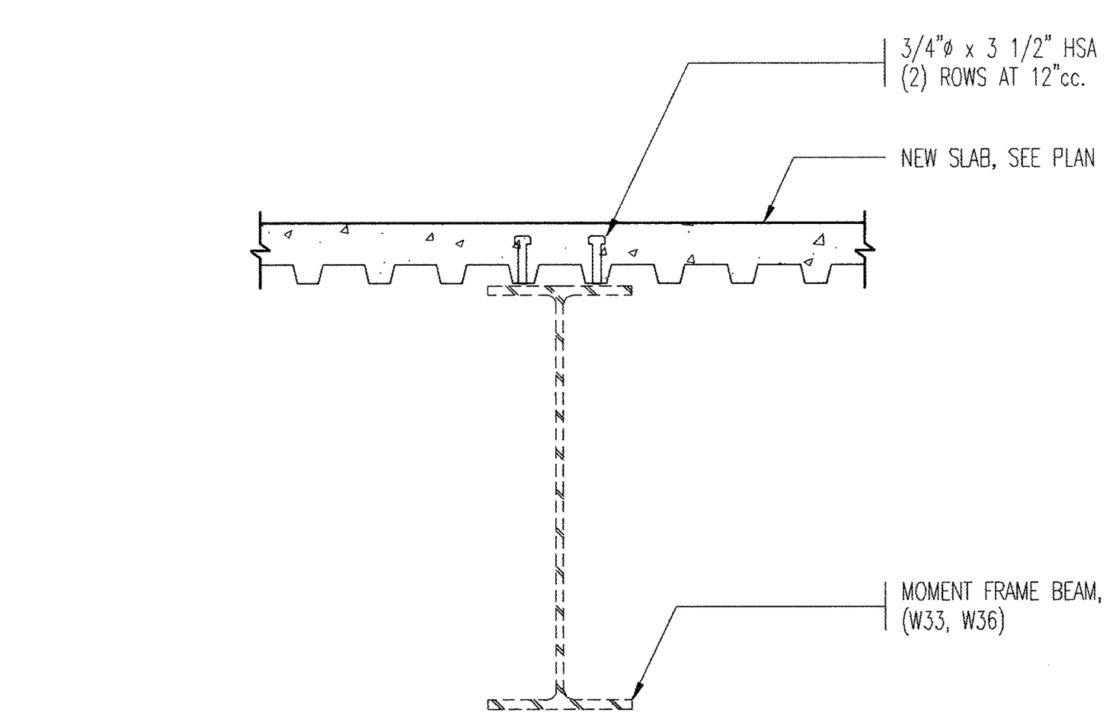


SEQUENCE NOTE:
1.) LOCATE WT UNDER BEAM
2.) JACK AND SHORE WT AND (E) BEAM UP AT 1/4 POINTS TO RELIEVE STRESS IN FLANGES
3.) WELD
4.) RELEASE JACK AND SHORING

SECTION A-A

(4) TYPICAL BEAM STRENGTHENING DETAIL

NO SCALE



(5) DETAIL

NO SCALE

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DETAILS AND SCHEDULES

S501

Sheet of Sheets

SYMBOL LEGEND

SYMBOL	DESCRIPTION
PLUMBING PIPING	
—CWV—	COMBINATION WASTE AND VENT
	SOIL, WASTE – ABOVE GRADE
	SOIL, WASTE – BELOW GRADE
—GW—	GREASE WASTE – ABOVE GRADE
—GW—	GREASE WASTE – BELOW GRADE
	VENT
—AV—	ACID VENT
—AW—	ACID WASTE – ABOVE GRADE
—AW—	ACID WASTE – BELOW GRADE
	COLD WATER
	HOT WATER
	HOT WATER CIRCULATE
—180—	180° HOT WATER
—180R—	180° HOT WATER RETURN
—160—	160° HOT WATER
—160R—	160° HOT WATER RETURN
—RW—	RAINWATER – ABOVE GRADE
—RW—	RAINWATER – BELOW GRADE
—ORW—	OVERFLOW RAINWATER ABOVE GRADE
—ORW—	OVERFLOW RAINWATER BELOW GRADE
—SD—	STORM DRAIN
VTR	VENT THRU ROOF
—✓—	NON POTABLE WATER
—(E)—	EXISTING PIPE
(E)	EXISTING PIPE TO BE REMOVED
—IW—	IRRIGATION WATER
—SS—	SANITARY SEWER
—W—	WATER
—PWS—	PURE WATER SUPPLY
—PWR—	PURE WATER RETURN
—G—	GAS
—LPG—	PROPANE
—VAC—	VACUUM
—A—	COMPRESSED AIR
—MA—	MEDICAL AIR
—O—	OXYGEN
—NO—	NITROUS OXIDE
—N—	NITROGEN
—CO2—	CARBON DIOXIDE
—EVAC—	EVACUATION

SYMBOL LEGEND

SYMBOL	DESCRIPTION
HVAC PIPING	
—HPS—	HIGH PRESSURE STEAM
—MPS—	MEDIUM PRESSURE STEAM
—LPS—	LOW PRESSURE STEAM
—HPC—	HIGH PRESSURE RETURN
—MPC—	MEDIUM PRESSURE RETURN
—LPC—	LOW PRESSURE RETURN
—PC—	PUMP DISCHARGE
—HWS—	HOT WATER SUPPLY
—HWR—	HOT WATER RETURN
—TWS—	TEMPERED WATER SUPPLY
—CWS—	CHILLED WATER SUPPLY
—CWR—	CHILLED WATER RETURN
—RL—	REFRIGERANT LIQUID
—RS—	REFRIGERANT SUCTION
—C—	CONDENSER WATER SUPPLY
—CR—	CONDENSER WATER RETURN
—D—	DRAIN LINE
—HG—	HOT GAS BYPASS
—GS—	GLYCOL SUPPLY
—GR—	GLYCOL RETURN
—FOS—	FUEL OIL SUCTION
—FOR—	FUEL OIL RETURN
—FOV—	FUEL OIL VENT
—(E)—	EXISTING PIPE
(E)	EXISTING PIPE TO BE REMOVED

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED

AD	ACCESS DOOR	MCA	MINIMUM CIRCUIT AMPS
AIR	AIR CONDITION(–ING,–ED)	MFR	MANUFACTURER
COND		MIN	MINIMUM
APD	AIR PRESSURE DROP	N/A	NOT APPLICABLE
BD	BALANCING DAMPER	NC	NORMALLY CLOSED
BHP	BRAKE HORSE POWER	NC	NOISE CRITERIA
BTU	BRITISH THERMAL UNIT	NIC	NOT IN CONTRACT
BTUH	BTU/HOUR	NO	NORMALLY OPEN
CFH	CUBIC FEET PER HOUR	NPSH	NET POSITIVE SUCTION HEAD
CFM	CUBIC FEET PER MINUTE		
CLG	COOLING	NTS	NOT TO SCALE
COMP	COMPONENT	OA	OUTSIDE AIR
COND	CONDENS(–ER, –ING, –ATION)	OD	OUTSIDE DIAMETER
		OZ	OUNCE
CV	CONTROL VALVE	PD	PRESSURE DROP OR DIFFERENCE
CW	COLD WATER		
DIA	DIAMETER	PG	PROPYLENE GLYCOL
DISCH	DISCHARGE	PH	PHASE
DP	DEPTH OR DEEP	PPM	PARTS PER MILLION
DB	DRY BULB TEMPERATURE	PRESS	PRESSURE
(E)	EXISTING	PSF	POUNDS PER SQUARE FOOT
EER	ENERGY EFFICIENCY RATIO		
EFF	EFFICIENCY	PSI	POUNDS PER SQUARE INCH
EG	ETHYLENE GLYCOL		
ELEC	ELECTRIC	PSIA	PSI ABSOLUTE
ELEV	ELEVATION	PSIG	PSI GAUGE
ENT	ENTERING	R	THERMAL RESISTANCE
EVAP	EVAPORAT(–E, –ING, –ED, –OR)	RA	RETURN AIR
		RECIRC	RECIRCULATE
EWT	ENTERING WATER TEMPERATURE	REFR	REFRIGERATION
		REQD	REQUIRED
EXT	EXTERNAL	RLA	RATED ---- AMPS
(F)	FUTURE	RPM	REVOLUTIONS PER MINUTE
F	FAHRENHEIT	RW	RAINWATER
FC	FLEXIBLE CONNECT(–OR, –ION)	SA	SUPPLY AIR
		SC	SHADING COEFFICIENT
FD	FIRE DAMPER	SCFM	STANDARD CUBIC FEET PER MINUTE
FLA	FULL LOAD AMPS		
FPI	FINS PER INCH	SCW	SOFT COLD WATER
FPM	FEET PER MINUTE	SF	SAFETY FACTOR
FPS	FEET PER SECOND	SH	SENSIBLE HEAT
FSD	FIRE SMOKE DAMPER	SL	SEA LEVEL
FT	FEET	SP	STATIC PRESSURE
GAL	GALLON(S)	SPECS(S)	SPECIFICATION(S)
GPH	GALLONS PER HOUR	SQ	SQUARE
GPM	GALLONS PER MINUTE	STD	STANDARD
HD	HEAD	STM	STEAM
HG	MERCURY	TEMP	TEMPERATURE
HR	HOUR	TD	TEMP. DROP OR DIFF.
HT	HEIGHT	THERM	THERMAL
HTG	HEATING	TOT	TOTAL
HP	HORSE POWER	TSTAT	THERMOSTAT
HW	HOT WATER	V	VOLT
HZ	HERTZ(FREQUENCY)	VAC	VACUUM
ID	INSIDE DIAMETER	VAV	VARIABLE AIR VOLUME
IN	INCH	VEL	VELOCITY
KW	KILOWATT	VENT	VENT, VENTILATION
LAT	LEAVING AIR TEMPERATURE	VERT	VERTICAL
		VFD	VARIABLE FREQUENCY DRIVE
LBS	POUNDS		
LG	LENGTH	VOL	VOLUME
LH	LATENT HEAT	WC	WATER COLUMN
LRA	LOCKED ROTOR AMPS	WG	WATER GAUGE
LVG	LEAVING	WPD	WATER PRESSURE DROP
LWT	LEAVING WATER TEMPERATURE	WTR	WATER
		WT	WEIGHT
MAX	MAXIMUM	WB	WET BULB TEMP
MBH	THOUSAND BTU PER HOUR	YR	YEAR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
VALVES, METERS, AND GAUGES	
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2–WAY VALVE
	AUTO 3–WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
MAV	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTUALIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STAINER
	REFRIGERANT FILTER DRIER
	90° ELBOW UP
	90° ELBOW DOWN
	90° TEE UP
	90° TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP
HVAC SYMBOLS	
T	THERMOSTAT
S	TEMPERATURE SENSOR
H	HUMIDISTAT
PLUMBING SYMBOLS	
C.B.	CATCH BASIN
M.H.	MANHOLE
W.H.	WALL HYDRANT
H.B.	HOSE BIBB
	CLEANOUT TO GRADE
	FLOOR CLEANOUT
	WALL CLEANOUT
	1/2 GRATE
	3/4 GRATE
	FULL GRATE

SYMBOL LEGEND

SYMBOL	DESCRIPTION	
DUCTWORK		
SINGLE LINE	DOUBLE LINE	DESCRIPTION
		RECTANGULAR SUPPLY DUCT UP
		RECTANGULAR SUPPLY DUCT DOWN
		RECTANGULAR RETURN DUCT UP
		RECTANGULAR RETURN DUCT DOWN
		RECTANGULAR EXHAUST DUCT UP
		RECTANGULAR EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		ACCOUSTICALLY LINED RECTANGULAR DUCT
		90° RECTANGULAR ELBOW WITH TURNING VANES
		90° RADIUS ELBOW R=1.5
		DUCT SIZE OR SHAPE TRANSITION
		OPPOSED BLADE BALANDING DAMPER (O.B.D.) IN RECT DUCT
		BUTTERFLY BALANCING DAMPER IN ROUND DUCTS
		COMBINATION TEE
		SPLITTER DAMPER
		SQUARE OR RECTANGULAR CEILING DIFFUSER
		ROUND CEILING DIFFUSER
		SIDEWALL REGISTER SUPPLY OR RETURN
		ROUND FLEXIBLE DUCT
		RETURN GRILLE
		EXHAUST GRILLE
FSD	FSD	FIRE/SMOKE DAMPER
		FIRE DAMPER
SD	SD	SMOKE DAMPER
FC	FC	FLEXIBLE CONNECTION
		EXISTING DUCT
		DUCT TO BE REMOVED

GENERAL MECHANICAL NOTES

1. ALL CEILING DIFFUSERS SHOWN AS SUCH ARE CD–1, CFM AS INDICATED, UNLESS OTHERWISE NOTED. REFER TO DETAIL 4/ME–501. (X / CFM)
2. ALL CEILING RETURN GRILLES SHOWN AS SUCH ARE RG–1 UNLESS OTHERWISE NOTED. (/)
3. ALL CEILING EXHAUST GRILLES SHOWN AS SUCH ARE EG–1, CFM AS INDICATED, UNLESS OTHERWISE NOTED. (/ CFM)
4. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'–0" DEEP AND 6'–6" HIGH. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
5. COORDINATE EXACT LOCATIONS OF CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
6. REFER TO REHEAT BOX DETAIL 1/ME–501.
7. ALL DUCT DIMENSIONS ARE INSIDE FREE AREA DIMENSIONS. ADJUST SHEET METAL DIMENSION FOR LINED DUCT.
8. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
9. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, VAV BOXES, FIRE DAMPERS, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
10. ALL DUCT AND FLUE PENETRATIONS THRU 1 HOUR ROOF ASSEMBLY TO BE ENCLOSED WITH 2 SHEET ROCK LAYERS FROM SHEET ROCK AT BOTTOM OF ROOF TRUSSES TO ROOF DECK.
11. STEEL ROOF DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT, UNLESS NOTED OTHERWISE. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHEN HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED; THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.

MECHANICAL SHEET INDEX

SYMBOL LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
# / SHEET	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, INTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	ROOM OR SPACE NUMBER.
1	KEYNOTE INDICATOR.
	REVISION INDICATOR.
CU–1	EQUIPMENT INDICATOR.
P–	PLUMBING FIXTURE INDICATOR.
TYPE / CFM / SIZE	DIFFUSER/GRILLE INDICATOR.
TYPE / SIZE	DIFFUSER/GRILLE INDICATOR.
	BREAK, STRAIGHT
	BREAK, ROUND.
MATCH LINE / SEE XX/X–XXX	MATCH LINE INDICATOR
--------	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
—·—·—	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
	NEW CONNECTION POINT TO EXISTING

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Salt Lake City, Utah
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MECHANICAL SYMBOLS LEGENED AND SHEET INDEX

ME-001

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REGISTER AND GRILLE SCHEDULE

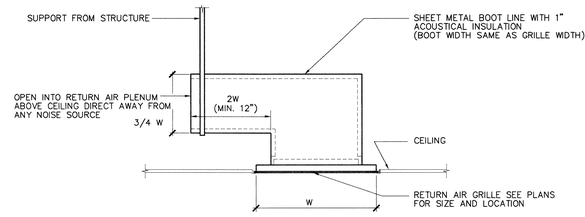
DESIGNATION	DESCRIPTION	SIZE	MAX. CFM	MAX. N.C.
CD-1	PERFORATED FACE CEILING DIFFUSERS REMOVABLE FACE & CORE. W/O.B.D. FRAME SHALL BE FOR SURFACE OR LAY-I IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24" X 24", 24" X 12", OR 12" X 12" AS REQ'D. TO FIT CEILING TILE SPACE AVAILABLE. DIFFUSER SHALL BE PRICE IND. MODEL PDC. INDIVIDUALLY ADJUSTABLE CURVED BLADES. PROVIDE ROUND NECK ADAPTER.	6 x 6 8 x 8 9 x 9 10 x 10 6 x 18 12 x 12 15 x 15 18 x 18	125 220 250 320 350 425 625 900	30
CD-2	2 SLOT LINEAR CEILING DIFFUSER WITH FULLY ADJUSTIBLE AIR PATTERN AND FLOW CONTROL VANES FOR ONE OR TWO WAY THROW PATTERN. UNITS SHALL HAVE 1" SLOTS AND INSULATED PLENUM WITH ROUND DUCT CONNECTION. UNITS SHALL BE KRUEGER MODEL 1900 FOR SURFACE MOUNTED APPLICATIONS OR KRUEGER MODEL TBSI-K FOR LAY-IN APPLICATIONS WITH CENTER NOTCH FOR 2'x 2' GRID SYSTEMS AS REQUIRED FOR CEILING TYPE. SURFACE MOUNTED UNITS SHALL HAVE CONCEALED FASTENING METHOD C.	24" LONG 48" LONG	0-160 160-320	30
SWR-1	SIDEWALL RETURN AIR GRILLE. HORIZONTAL STATIONARY 45 DEG DEFLECTION VANES SET ON ½ INCH CENTER, COMPLETE WITH OBD ADJUSTABLE THROUGH FACE.	24" LONG 48" LONG	0-160 160-320	30

DESIGNATION	DESCRIPTION	SIZE	MAX. CFM	MAX. N.C.
RG-1	PERFORATED FACE RETURN AIR UNIT, REMOVABLE FACEAND CORE. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24"X24", 24"X12" OR 12"X12" AS REQUIRED TO FIT TILE SPACE AVAILABLE. AIR QUANTITY SHALL MATCH ROOM SUPPLY OR EXHAUST AIR QUANTITY.	24" LONG 48" LONG	0-160 160-320	30
RG-2	3 SLOTS LINEAR CEILING RETURN GRILLE. UNITS SHALL HAVE 1" SLOTS & INSULATED PLENUM. UNITS SHALL BE KRUEGER MODEL 1900 FOR SURFACE MOUNTED APPLICATIONS OR KRUEGER MODEL TBRI FOR LAY-IN APPLI-CATIONS WITH CENTER NOTCH FOR 2' X 2' GRID SYSTEM AS REQ'D. FOR CEILING TYPE. SURFACE MOUNTED UNITS SHALL HAVE CONCEALED FASTENING METHOD C.	48" LONG	320-500	
EG-1	EH PRICE MODEL NUMBER PDDR PERFORATED FACE EXHAUST AIR UNIT, REMOVABLE FACE & CORE. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES HSLL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE.	10 x 10 12 x 12 14 x 14 15 x 15	350 500 680 780	20

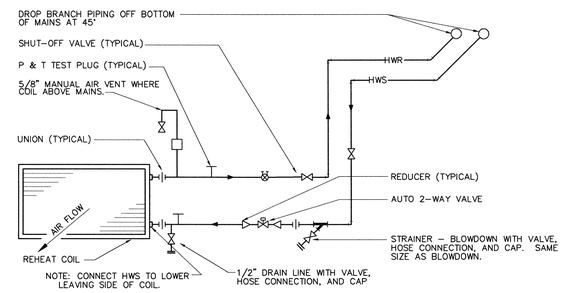
VARIABLE VOLUME REHEAT BOX SCHEDULE

SYMBOL	MANUFACTURER	MODEL	INLET BOX SIZE	BOX PRESS. DROP	CFM COOLING	CFM HEATING	CFM MINIMUM	NC LEVELS @2" S.P. AIR	NC LEVELS @2" S.P. RAD	COIL LAT DEG. F	COIL GPM	COIL AIR P.D.	COIL MIN. SIZE WxH	COIL MIN ROWS	COIL MIN. FINS.	COMMENTS
VR-1	PRICE	SDV	16	0.23	2285	1920	690	28	31	96.9	7.9	0.22	24x18	1	10	
VR-2	PRICE	SDV	16	0.26	2500	1920	750	29	32	96.9	7.9	0.25	24x18	1	10	
VR-3	PRICE	SDV	12	0.23	1280	840	840	28	28	80.0	2.1	0.22	16x15	1	8	
VR-4	PRICE	SDV	14	0.23	1880	565	565	29	32	87.6	1.8	0.22	20x17.5	1	8	
VR-5	PRICE	SDV	8	0.18	535	320	320	22	22	87.5	1.0	0.17	12x10	1	8	
VR-6	PRICE	SDV	6	0.19	285	145	90	20	19	96.2	0.6	0.09	12x8	1	8	
VR-7	PRICE	SDV	7	0.14	355	140	110	23	21	96.3	0.6	0.09	12x10	1	8	
VR-8	PRICE	SDV	7	0.14	355	335	110	23	21	96.6	1.4	0.09	12x10	1	8	
VR-9	PRICE	SDV	6	0.22	345	135	105	22	20	96.7	0.6	0.12	12x8	1	8	
VR-10	PRICE	SDV	6	0.22	345	135	105	22	20	96.7	0.6	0.12	12x8	1	8	
VR-11	PRICE	SDV	8	0.15	485	205	160	21	21	96.7	0.8	0.14	12x10	1	8	
VR-12	PRICE	SDV	8	0.20	575	200	175	23	22	96.5	0.8	0.19	12x10	1	8	
VR-13	PRICE	SDV	8	0.16	495	180	160	21	21	96.5	0.7	0.15	12x10	1	8	
VR-14	PRICE	SDV	7	0.17	430	185	130	25	22	96.5	0.8	0.12	12x10	1	8	
VR-15	NOT USED															
VR-16	PRICE	SDV	6	0.19	295	130	90	20	19	96.5	0.5	0.09	12x8	1	8	
VR-17	PRICE	SDV	6	0.18	270	135	85	19	18	97.0	0.6	0.08	12x8	1	8	
VR-18	PRICE	SDV	7	0.17	440	135	135	25	22	80.0	0.5	0.12	12x10	1	8	
VR-19	PRICE	SDV	12	0.28	1450	435	435	29	29	80.0	1.1	0.27	16x15	1	8	
VR-20	PRICE	SDV	16	0.26	2500	750	750	29	32	80.0	1.9	0.25	24x18	1	8	
VR-21	PRICE	SDV	9	0.13	640	420	420	27	21	80.0	1.1	0.12	14x12.5	1	8	
VR-22	PRICE	SDV	9	0.15	715	215	215	27	22	80.0	0.5	0.14	14x12.5	1	8	
VR-23	PRICE	SDV	9	0.13	640	420	420	27	21	80.0	1.1	0.12	14x12.5	1	8	

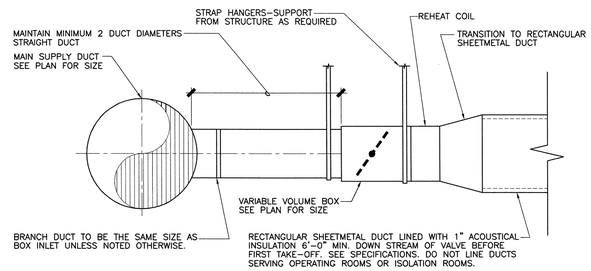
(1) ENTERING AIR AT 52 DEG F @ 4500 FT. ELEVATION.
(2) GPM BASED ON 180 DEG F ENTERING WATER TEMPERATURE, 160 DEG F LEAVING WATER TEMPERATURE
(3) COIL MAXIMUM WATER P.D. AT 3.0 FT. ' MAX. AIR P.D. AT 0.10".
(4) MAXIMUM N.C. LEVEL AT 2.0" S.P. – AIR 36, RAD., 30 UNLESS OTHERWISE NOTED.
(5) NC LEVELS ARE BASED ON 5 FT. LINED DUCT, 10Db ROOM ATTENUATION AND AN AVERAGE LAY-IN CEILING WITH STC 34-40 RATING.
(6) COIL BASED ON PACE TYPE HW COILS.



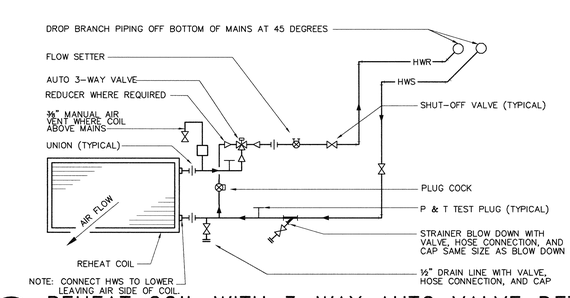
3 RETURN AIR SOUND BOOT DETAIL
SCALE: NOT TO SCALE



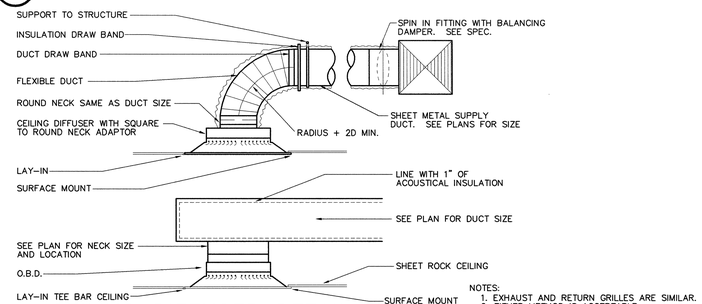
2 REHEAT COIL PIPING DETAIL
SCALE: NOT TO SCALE



1 VARIABLE VOLUME BOX DETAIL
SCALE: NTS

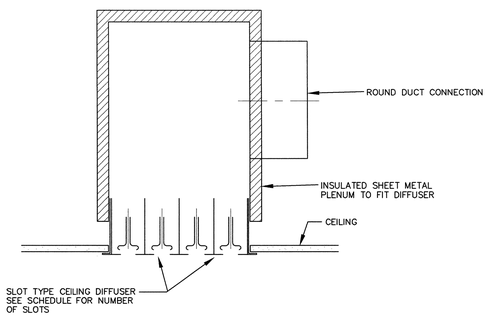


5 REHEAT COIL WITH 3-WAY AUTO VALVE DETAIL
SCALE: NOT TO SCALE



NOTES:
1. EXHAUST AND RETURN GRILLES ARE SIMILAR.
2. EITHER METHOD IS ACCEPTABLE

4 CEILING DIFFUSER DETAIL
SCALE: NOT TO SCALE



6 SLOT DIFFUSER DETAIL
SCALE: NOT TO SCALE

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MECHANCIAL DETAILS AND SCHEDULES

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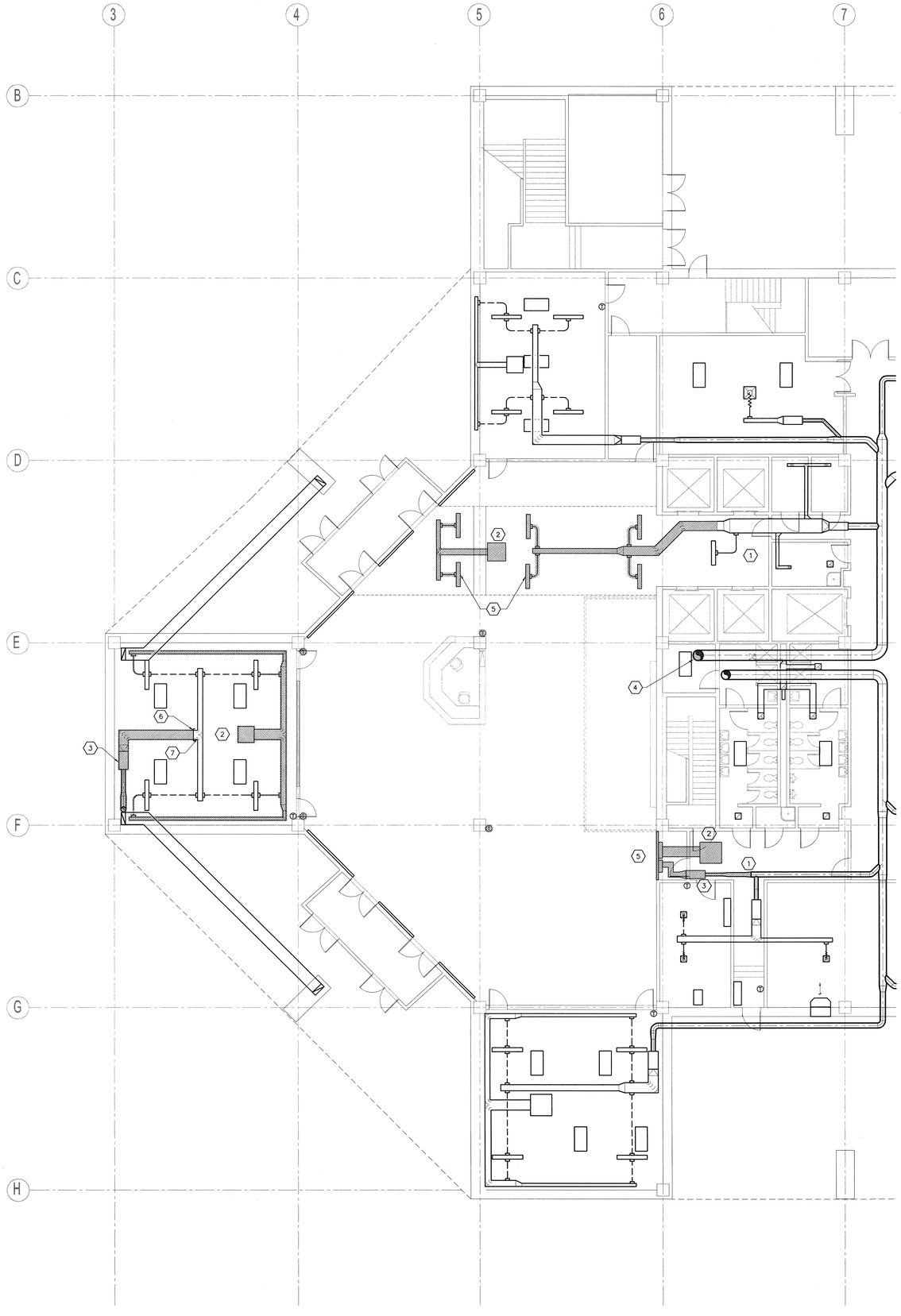

SHEET KEYNOTES

1. CAP OPEN END OF DUCTWORK DURING DEMOLTION.
2. REMOVE HEATING UNIT.
3. REMOVE VAV BOX.
4. REPLACE RISER DUCT TO 2ND FLOOR WITH 32"ø DUCT.
5. REMOVE EXISTING DIFFUSERS AND GRILLES TYPICAL.
6. CAP AND SEAL DUCT.
7. REMOVE EXISTING TURNING VANES.

1 MAIN LEVEL MECHANICAL HVAC PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

0 4' 8' 16'

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MAIN LEVEL
MECHANICAL
DEMOLITION PLAN

MD-101

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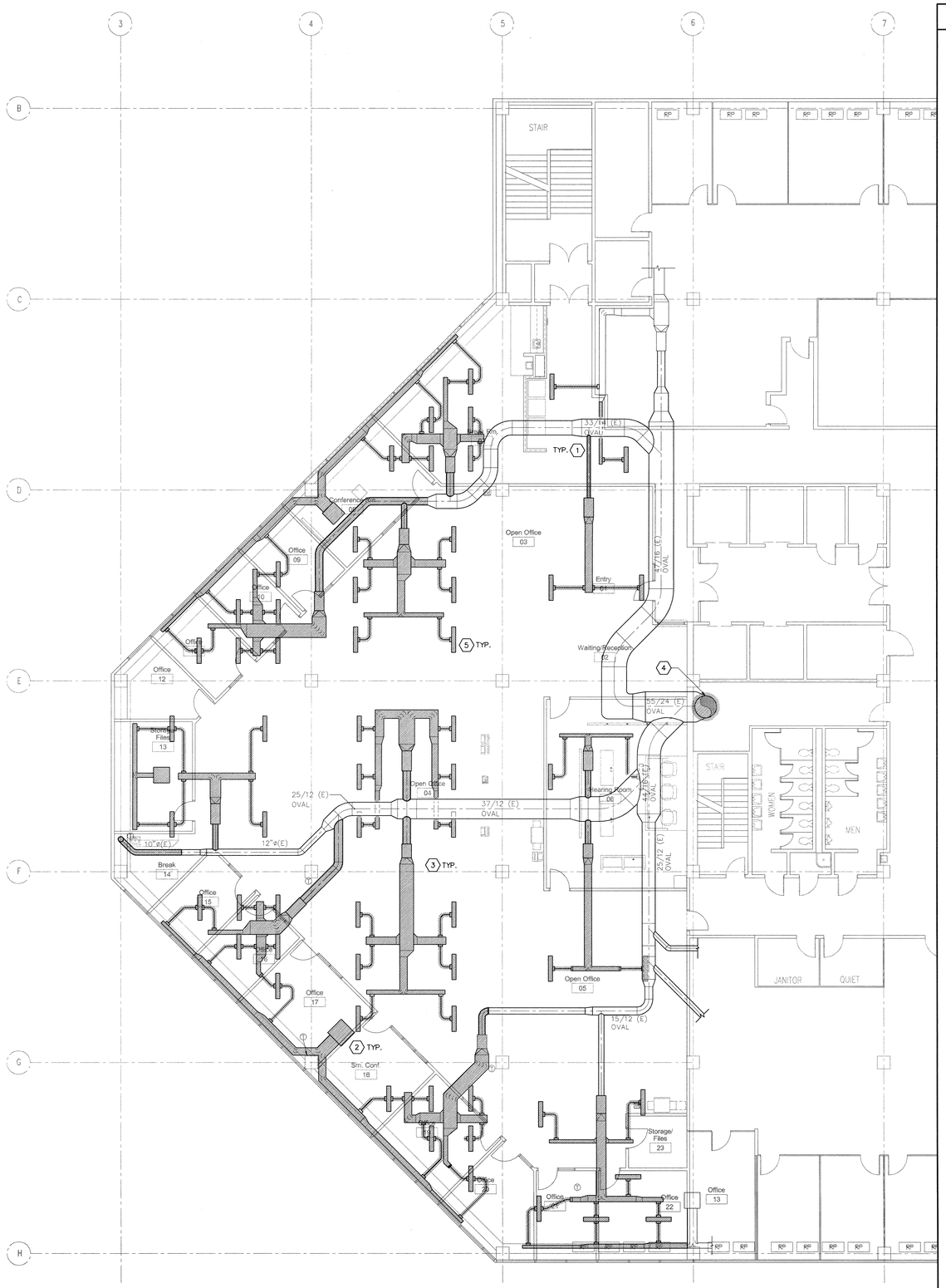

SHEET KEYNOTES

1. CAP OPEN END OF DUCTWORK DURING DEMOLITION.
2. REMOVE HEATING UNIT.
3. REMOVE VAV BOX.
4. REPLACE RISER DUCT UP TO 3RD FLOOR WITH 44"ø DUCT. SEE NEW HVAC PLAN.
5. REMOVE EXISTING DIFFUSERS AND GRILLES.

1 SECOND LEVEL MECHANICAL HVAC DEMOLITION PLAN
SCALE: 1/8"=1'-0"

0 4' 8' 16'

PLAN NORTH

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SECOND LEVEL
MECHANICAL
DEMOLITION PLAN

MD-102

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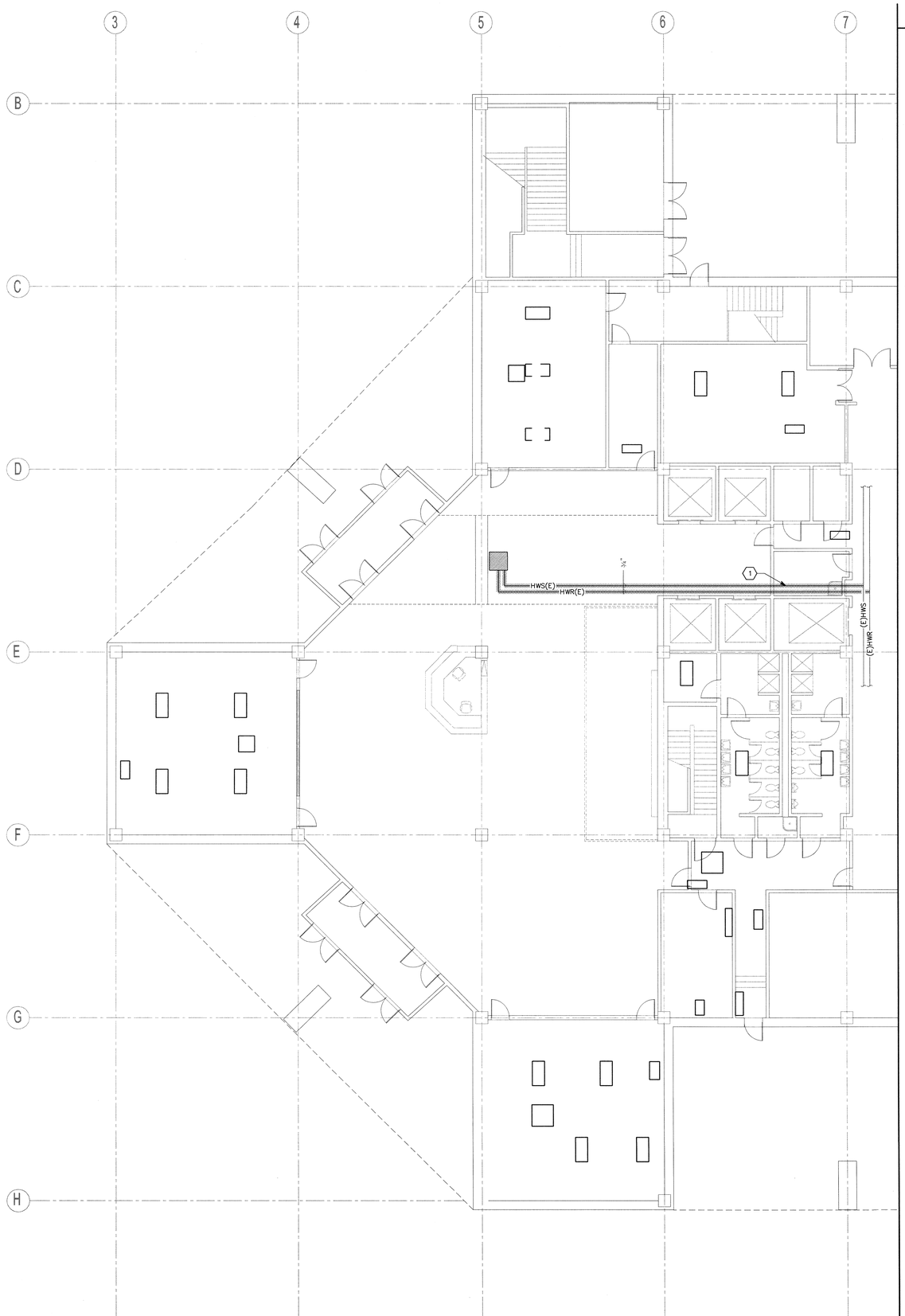

SHEET KEYNOTES

1. DEMO HOT WATER LINES BACK TO MAINS AND CAP.

1 MAIN LEVEL MECHANICAL PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

0 4' 8' 16'

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MAIN LEVEL
MECHANICAL PIPING
DEMOLITION PLAN

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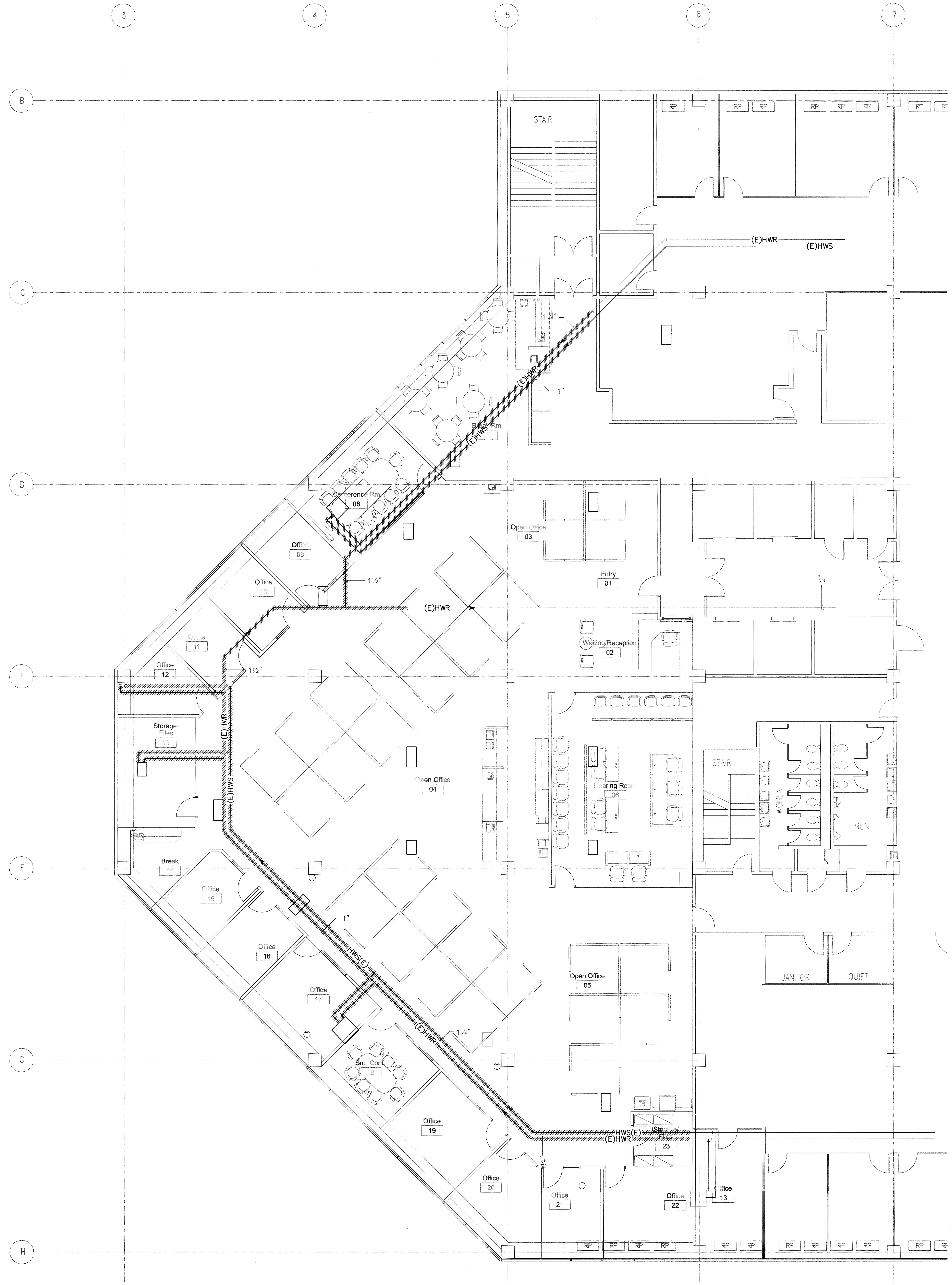

1 SECOND LEVEL MECHANICAL PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

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SECOND LEVEL MECHANICAL PIPING DEMOLITION PLAN

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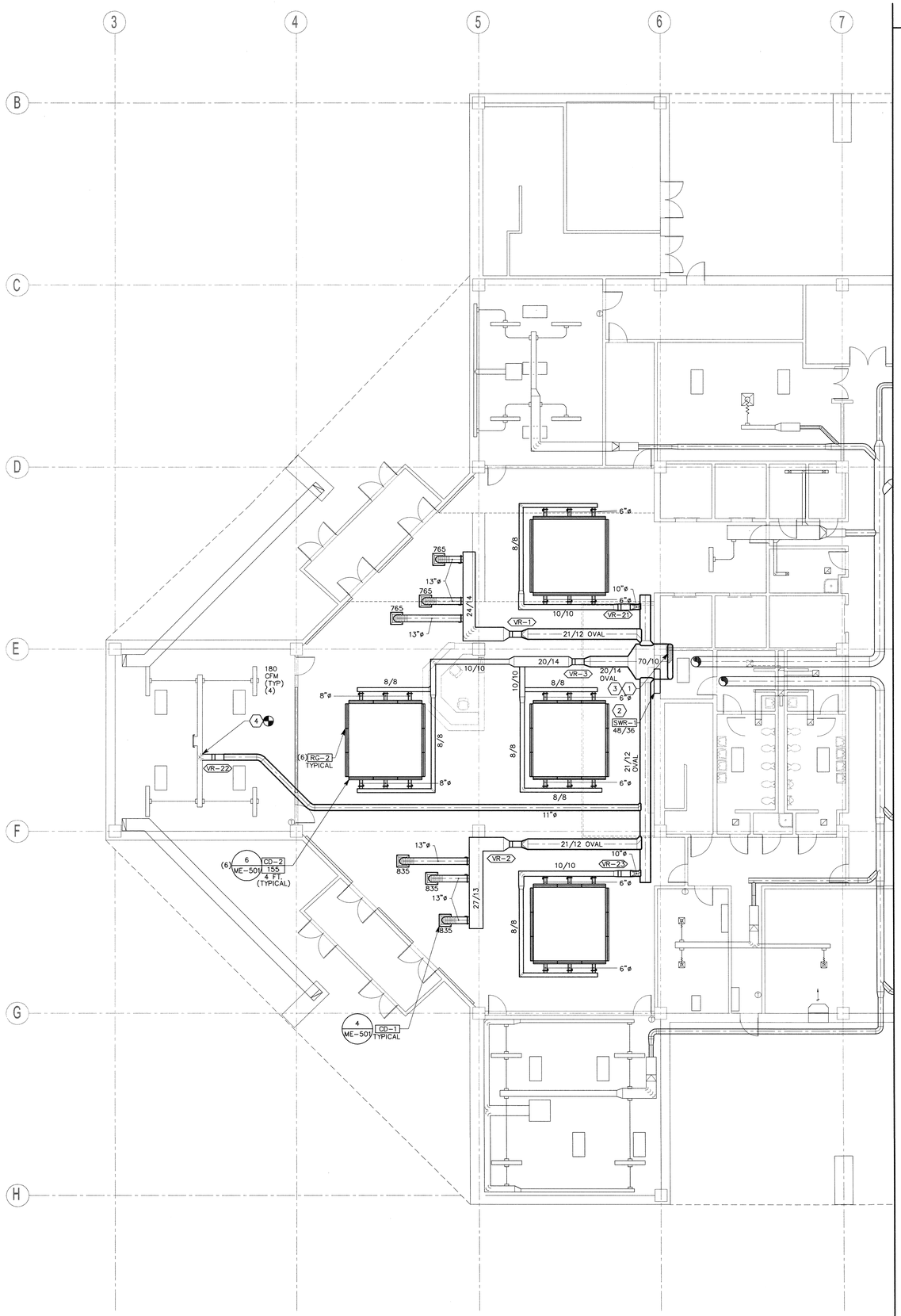

SHEET KEYNOTES

1. PROVIDE FIRE DAMPER IN DUCT AT FLOOR ABOVE.
2. MOUNT RETURN AIR GRILLE IN WALL.
3. REPLACE EXIST 20"ø DUCT WITH NEW 32"ø TO SECOND FLOOR.
4. CONNECT TO EXISTING DUCT.

1 MAIN LEVEL MECHANICAL HVAC PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

0 4' 8' 16'

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MAIN LEVEL
MECHANICAL
HVAC PLAN

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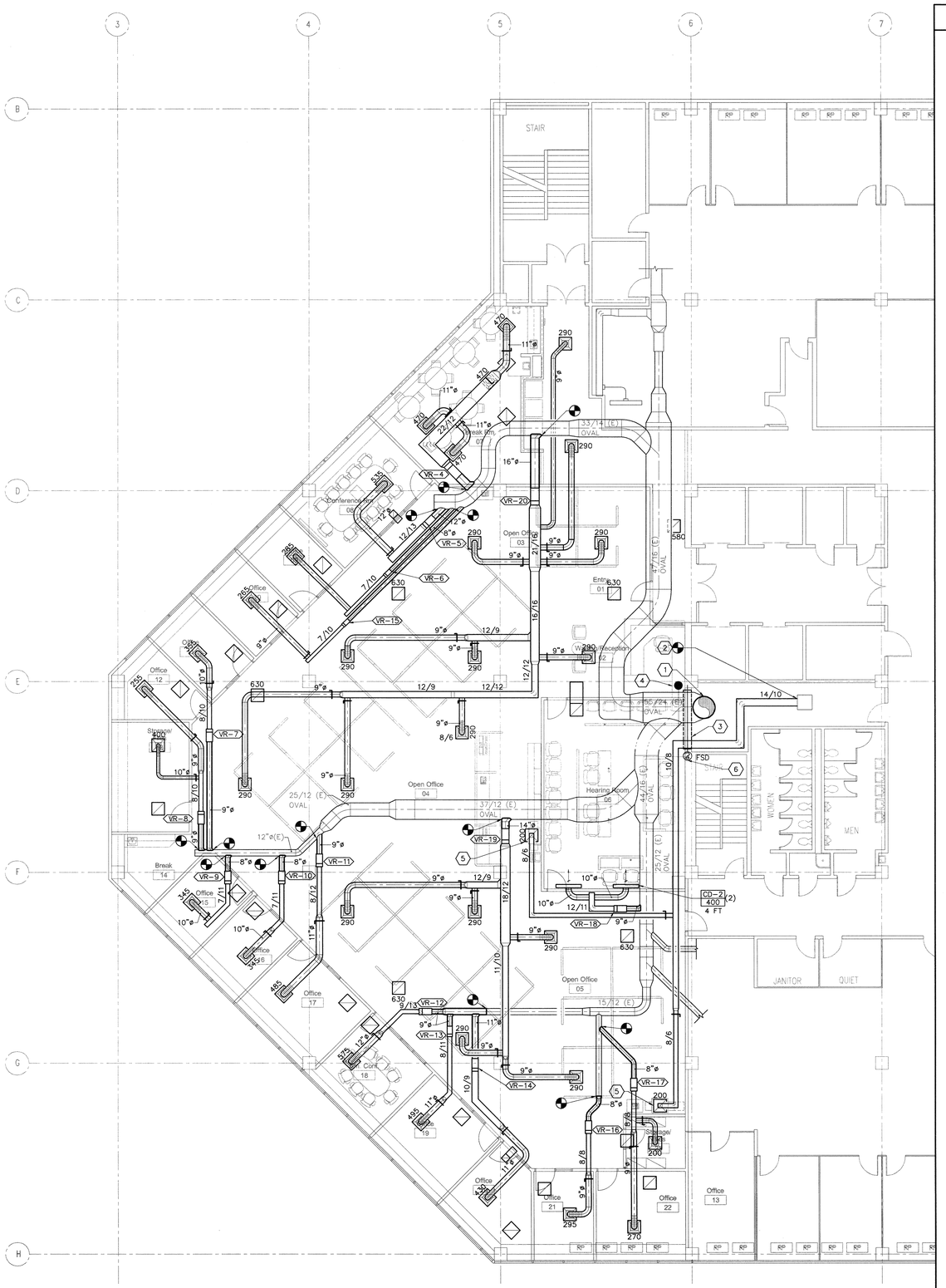

SHEET KEYNOTES

1. REPLACE EXISTING 40"ø DUCT WITH NEW 44"ø DUCT TO THIRD FLOOR.
2. CONNECT TO EXISTING EXHAUST RISER HERE.
3. 24 SQ FT RETURN AIR OPENING IN WALL ABOVE CEILING.
4. EXISTING FIRE SMOKE DAMPER TO REMAIN IN SUPPLY DUCT.
5. GENERAL EXHAUST FOR COPY MACHINE VOC EMISSION.
6. INSTALL NEW FIRE/SMOKE DAMPER IN RETURN AIR OPENING.

1 SECOND LEVEL MECHANICAL HVAC PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

0 4' 8' 16'

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SECOND LEVEL
MECHANICAL
HVAC PLAN

MH-102

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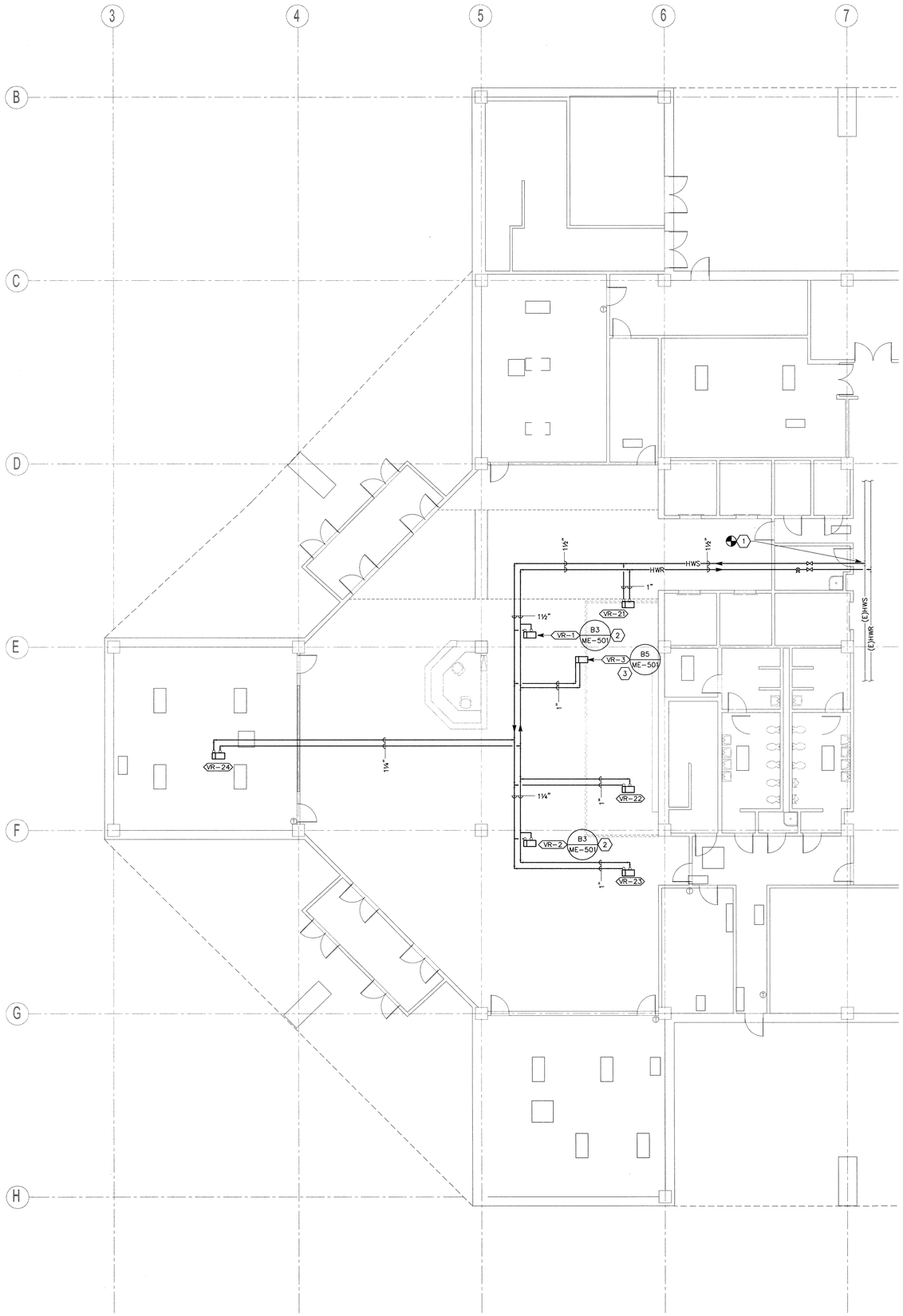

SHEET KEYNOTES

1. CONNECT TO EXISTING HOT WATER SUPPLY AND RETURN MAIN LINES.
2. INSTALL 3-WAY CONTROL VALVE.
3. INSTALL 2-WAY CONTROL VALVE.

PLAN NORTH

0 4' 8' 16'

1 MAIN LEVEL MECHANICAL PIPING PLAN
SCALE: 1/8"=1'-0"

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MAIN LEVEL
MECHANICAL
PIPING PLAN

MP-101

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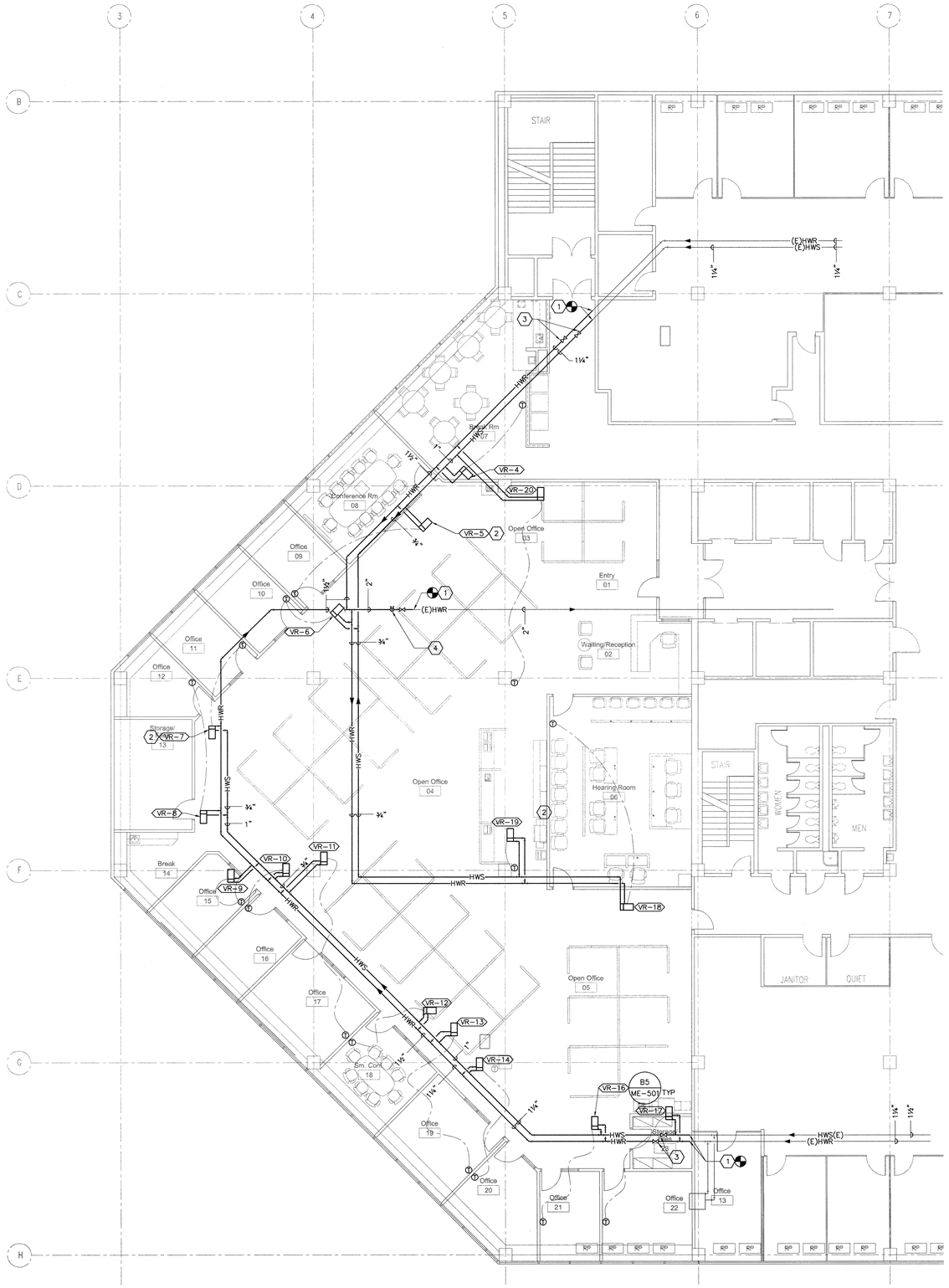

SHEET KEYNOTES

1. CONNECT TO EXISTING HOT WATER PIPING.
2. INSTALL 2-WAY CONTROL VALVE.
3. INSTALL NEW SHUT OFF VALVES.
4. FLOW SETTER. SET AT 37.7 GPM.

1 SECOND LEVEL MECHANICAL PIPING PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

0 4' 8' 16'

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SECOND LEVEL
MECHANICAL
PIPING PLAN

MP-102

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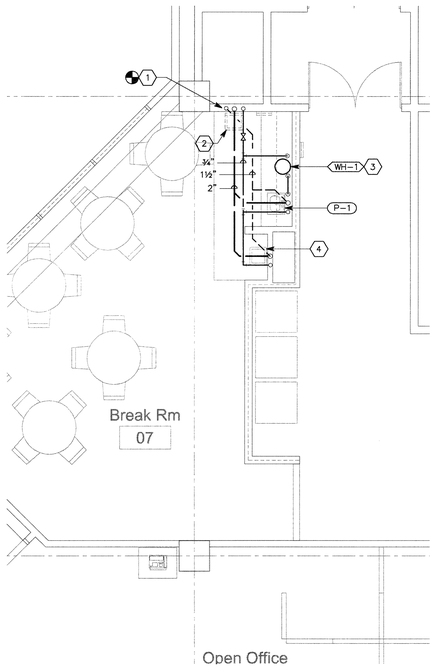
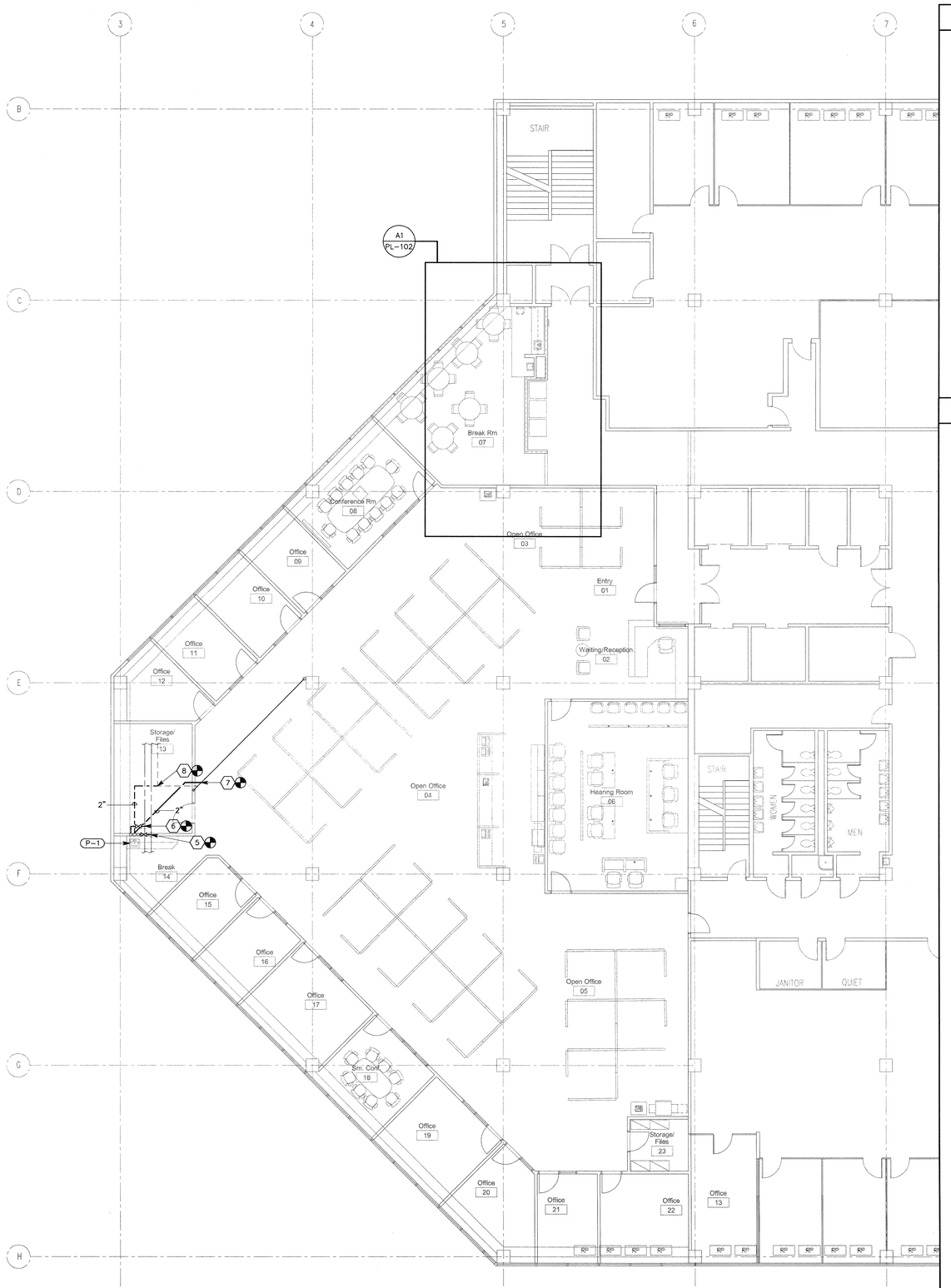
INSTANTANEOUS ELECTRIC DOMESTIC HOT WATER HEATER

SYMBOL	MANUFACTURER	MODEL NO.	TYPE	INPUT KW	VOLTS/ PHASE/ CYCLE	RECOVERY RATE GPH	WATER TEMP IN/OUT	COMMENTS
WH-1	AO SMITH	DSE-10	TANK	2.0	480 / 1 / 60	9.00	40/130	

PLUMBING FIXTURE SCHEDULE

FIX. NO.	FIXTURE	WASTE	TRAP	VENT	HW	CW	A	G	COMMENTS
P-1	SINK	2	1 1/2	2	3/4	3/4			





GENERAL PLUMBING NOTES

1. REFER TO MECHANICAL SHEET ME-001 FOR SYMBOLS LEGEND.
2. INSTALL WATER, AND, VENT PIPING SHOWN ABOVE THE CEILING UNLESS NOTED OTHERWISE.
3. INSTALL WASTE PIPING SHOWN BELOW THE FLOOR UNLESS NOTED OTHERWISE.
4. INSTALL ALL PIPING SHOWN IN EXTERIOR WALLS ON THE WARM SIDE OF THE BUILDING INSULATION.
5. DO NOT RUN PIPING ABOVE ELECTRICAL PANELS. PROVIDE 4'-0" DEEP X 6'-6" HIGH CLEAR ACCESS SPACE IN FRONT OF PANELS. DO NOT RUN PIPING IN ELECTRICAL ROOMS.
6. FIELD DETERMINE EXACT SIZE, ELEVATION AND LOCATION OF EXISTING PIPING INSIDE THE BUILDING AT SPECIFIED CONNECTION POINTS PRIOR TO STARTING ANY WORK.
7. SAW CUT EXISTING FLOOR AS REQUIRED TO RUN NEW WASTE AND VENT PIPING, PATCH AND REPAIR TO MATCH EXISTING.
8. SAW CUT OR CORE DRILL ALL NEW PENETRATIONS THRU EXISTING MASONRY CONSTRUCTION.
9. PATCH AND REPAIR ALL EXISTING SURFACES DAMAGED BY NEW CONSTRUCTION TO MATCH EXISTING.
10. COORDINATE EXACT LOCATION OF FIXTURES AND DRAINS WITH ARCHITECTURAL DRAWINGS.
11. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL AND PLUMBING EQUIPMENT, VALVES, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.

⬡SHEET KEYNOTES

1. CONNECT TO EXISTING 1½ VENT, 2" WASTE, AND ¾" COLD WATER.
2. EXISTING WATER COOLER TO BE RELOCATED.
3. MOUNT WATER HEATER UNDER CABINET. CAREFULLY COORDINATE WITH ARCHITECTURAL PLANS AND MANUFACTURERS INSTALLATION INSTRUCTIONS.
4. EXISTING WATER COOLER IN NEW LOCATION.
5. CONNECT TO EXISTING COLD WATER.
6. CONNECT TO EXISTING HOT WATER.
7. CONNECT TO EXISTING WASTE.
8. CONNECT TO EXISTING VENT.

2 LARGE SCALE PLUMBING PLAN
SCALE: 1/8"=1'-0"

1 SECOND LEVEL PLUMBING PLAN
SCALE: 1/8"=1'-0"

PLAN NORTH

0 4' 8' 16'

VCBO
ARCHITECTURE
VALENTINER
CRANE
BRUNJES
ONYON

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah

T.I.

Rev #	Date	Description

Job # 05310
CAD File
Drawn SCM Checked JTJ
Date 5-10-06
Owner #
Ins. #

SECOND LEVEL
PLUMBING
PIPING PLAN

PL-102
Sheet of Sheets

File name: P:\2005\20050373\1Drawings\Sheet\73PL-102.dwg Last Plotted: 05/16/2006 @ 08:34 By: TNB

SYMBOL LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 / E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	ROOM OR SPACE NUMBER.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING.
	BREAK, ROUND.
MATCH LINE / SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
WIRING METHODS	
	WIRING.
	WIRING TURNED UP OR TOWARDS OBSERVER.
	WIRING TURNED DOWN OR AWAY FROM OBSERVER.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
	FLEXIBLE WIRING.
—FA— —FO— — I — — P — —RC— — S — — T — —TV—	WIRING AND/OR RACEWAY: THIN LINE. FA FOR FIRE ALARM, FO FOR FIBER OPTICS, I FOR INTERCOM, P FOR POWER, RC FOR RIGID CONDUIT, S FOR SOUND, T FOR TELEPHONE, TV FOR TELEVISION AND OTHERS AS NOTED IN OTHER SCHEDULES. RACEWAYS AND WIRING SHALL BE SIZED AS SHOWN AND/OR SPECIFIED.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
1	CONDUCTOR RUN IDENTIFICATION.
	JUNCTION BOX.
SC	JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION CONNECTION.
SP	JUNCTION BOX, SYSTEMS FURNITURE POWER CONNECTION.
	JUNCTION BOX, DUCT, UNDERFLOOR. TRIPLE, DOUBLE OR SINGLE DUCT SYSTEM AS INDICATED BY THE NUMBER OF PARALLEL LINES. DESIGNATIONS AS SHOWN FOR WIRING AND/OR RACEWAY SYMBOLS.
	DUCT CELL FLOOR HEADER.
PB	PULL BOX.
C C	CABLE TRAY.
	EARTH GROUND (ONE-LINE DIAGRAM).
C	JUNCTION BOX, CEILING.
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
C	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
D	RECEPTACLE, DUPLEX, DEDICATED CIRCUIT: NEMA 5-20R.
DF	RECEPTACLE, DUPLEX, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE DIVISION 15 SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
IG	RECEPTACLE, DUPLEX, ISOLATED GROUND: NEMA 5-20R.
S	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
PT#	FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN SECTION 16140 FOR CONFIGURATION AND DEVICES.
	SWITCH, DIMMER.
X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
X $3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
X $4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
ELECTRICAL POWER AND DISTRIBUTION	
	FUSE WITH RATING (ONE-LINE DIAGRAM).
	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	MOTOR.
F	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
DP#—	DISTRIBUTION PANEL OR SWITCHBOARD.
LP	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
	LIGHTING CONTROL STATION.
	DIMMING ENTRY STATION OR CONTROL STATION, FLUSH MOUNTED.
	CENTRAL PROCESSOR UNIT.
$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
75	TRANSFORMER: NUMBER INDICATES kVA.
B B	BUSWAY.
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
(W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
EM	EMERGENCY.
NL	NIGHT LIGHT: DO NOT SWITCH.
	EGRESS DIRECTION ARROW.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
P	PHOTOCELL.
TC	TIME CLOCK.
STRUCTURED CABLING	
X	TELEPHONE, WALL MOUNTED ("X" INDICATES QUANTITY OF CABLES).
P	TELEPHONE, WALL MOUNTED: PAY PHONE.
W	TELEPHONE, WALL MOUNTED: WALL PHONE.
X	OUTLET, DATA COMMUNICATION ("X" INDICATES QUANTITY OF CABLES).
	OUTLET, BUILDING STANDARD COMBINATION TELEPHONE/ DATA COMMUNICATION.
	TELEPHONE TERMINAL BOARD, FIRE TREATED PLYWOOD PAINTED.
FIRE ALARM	
FSA	FIRE SYSTEM ANNUNCIATOR.
FCP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
FPS	FIRE ALARM NOTIFICATION POWER SUPPLY.
FTR	FIRE ALARM TRANSPONDER OR TRANSMITTER.
HVA	SMOKE CONTROL PANEL.
C	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED TO BY DIVISION 16 INSTALLERS.
CM	CONTROL MODULE.
MM	MONITOR MODULE.
P	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
	MAGNETIC DOOR HOLDER.
	DETECTOR, SMOKE.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	DETECTOR, HEAT.
E	SPEAKER, EVACUATION, COMBINATION STROBE.
SD	SMOKE DAMPER.
FSD	FIRE AND SMOKE DAMPER.
SECURITY	
#1	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
CR	CARD READER.
KCR	KEYPAD/CARD READER COMBINATION.
TV DISTRIBUTION	
	TV OUTLET.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE	kVAR	KILOVOLT AMPERE REACTIVE
1PH	SINGLE-PHASE	kW	KILOWATT
1WAY	ONE-WAY	kWh	KILOWATT HOUR
2/C	TWO-CONDUCTOR	LED	LIGHT EMITTING DIODE
2WAY	TWO-WAY	LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
3/C	THREE-CONDUCTOR	LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
3PH	THREE-PHASE	LPS	LOW PRESSURE SODIUM
3WAY	THREE-WAY	LRA	LOCKED ROTOR AMPS
4OUT	QUADRUPLE RECEPTACLE OUTLET	LTG	LIGHTING
4PDT	FOUR-POLE DOUBLE THROW	LV	LOW VOLTAGE
4PST	FOUR-POLE SINGLE THROW	MATV	MASTER ANTENNA TELEVISION SYSTEM
4W	FOUR-WIRE	MAX	MAXIMUM
4WAY	FOUR-WAY	MC	METAL CLAD
AC	ARMORED CABLE	MCA	MINIMUM CIRCUIT AMPS
ADA	AMERICANS WITH DISABILITIES ACT	MCB	MAIN CIRCUIT BREAKER
ADJ	ADJACENT	MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MCP	MOTOR CIRCUIT PROTECTION
AFG	ABOVE FINISHED GRADE	MDP	MAIN DISTRIBUTION PANEL
AIC	AMPERE INTERRUPTING CAPACITY	MG	MOTOR GENERATOR
ALUM	ALUMINUM	MH	MANHOLE
AMP	AMPERE	MIN	MINIMUM
ANN	ANNUNCIATOR	MLO	MAIN LUGS ONLY
AR	AS REQUIRED	MOCP	MAXIMUM OVERCURRENT PROTECTION
ASC	AMPS SHORT CIRCUIT	NA	NOT APPLICABLE
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BB XFMR	BUCK-BOOST TRANSFORMER	NFC	NATIONAL FIRE CODE
CATV	COMMUNITY ANTENNA TELEVISION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT	NL	NIGHT LIGHT
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPEN
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT	NTS	NOT TO SCALE
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED	OC	ON CENTER
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED	OCP	OVER CURRENT PROTECTION
CKT	CIRCUIT	OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
CM	CONSTRUCTION MANAGER	OF/OI	OWNER FURNISHED/ OWNER INSTALLED
CND	CONDUIT	OFP	OBTAIN FROM PLANS
CO	CONVENIENCE OUTLET	OH DR	OVERHEAD (COILING) DOOR
COR	CONTRACTING OFFICER'S REPRESENTATIVE	OL	OVERLOAD
CP	CONTROL PANEL	PB	PUSHBUTTON
CT	CURRENT TRANSFORMER	PF	POWER FACTOR
CTV	CABLE TELEVISION	PH	PHASE
CU	COPPER	PNL	PANEL
dBA	UNIT OF SOUND LEVEL	PT	POTENTIAL TRANSFORMER
DPDT	DOUBLE POLE DOUBLE THROW	QTY	QUANTITY
DS	DISCONNECT SWITCH	R	REMOVE
EA	EACH	RCP	REFLECTED CEILING PLAN
EM	EMERGENCY	RMC	RIGID METAL CONDUIT
EMT	ELECTRICAL METALLIC TUBING	RNC	RIGID NONMETALLIC CONDUIT
ENT	ELECTRICAL NONMETALLIC TUBING	RPM	REVOLUTIONS PER MINUTE
EPO	EMERGENCY POWER OFF	RR	REMOVE AND RELOCATE
EQUIP	EQUIPMENT	SCA	SHORT CIRCUIT AMPS
EXIST	EXISTING	SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
FA	FIRE ALARM	SF	SQUARE FOOT (FEET)
FCP	FIRE ALARM CONTROL PANEL	SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
FLA	FULL LOAD AMPS	SPDT	SINGLE POLE, DOUBLE THROW
FMC	FLEXIBLE METALCONDUIT	SPEC	SPECIFICATION
FOB	FREIGHT ON BOARD	SPST	SINGLE POLE, SINGLE THROW
FVNR	FULL VOLTAGE NON-REVERSING	S/S	START/STOP
FVR	FULL VOLTAGE REVERSING	ST	SINGLE THROW
G	GROUND	SWBD	SWITCHBOARD
GEN	GENERATOR	SWGR	SWITCHGEAR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TL	TWIST LOCK
GFP	GROUND FAULT PROTECTION	TP	TELEPHONE POLE
HD	HEAVY DUTY	TP	TWISTED PAIR
HID	HIGH INTENSITY DISCHARGE	TTB	TELEPHONE TERMINAL BOARD
HOA	HAND-OFF-AUTOMATIC	TV	TELEVISION
HP	HORSE POWER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
HPF	HIGH POWER FACTOR	TYP	TYPICAL
HPS	HIGH PRESSURE SODIUM	UF	UNDERFLOOR
HV	HIGH VOLTAGE	UGND	UNDERGROUND
HZ	HERTZ	UPS	UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND	V	VOLTS
IMC	INTERMEDIATE METAL CONDUIT	VA	VOLT AMPERE
IN/IS	INSULATED/ISOLATED	VFC	VARIABLE FREQUENCY CONTROLLER
I/O	INPUT/OUTPUT	W/	WITH
IR	INFRARED	W/O	WITHOUT
KV	KILOVOLT	WP	WEATHERPROOF
KVA	KILOVOLT AMPERE	XFMR	TRANSFORMER

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

ELECTRICAL SHEET INDEX

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.

   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.

   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE SUBMITTALS IN THREE RING BINDERS WITH JOB NAME, SUBCONTRACTOR, AND VOLUME ON THE BINDING. PREPARE TABS FOR EACH SPECIFICATION SECTION REQUIRING SUBMITTALS. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

VCBO
ARCHITECTURE
VALENTINER
CRANE
BRUNJES
ONYON

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah

T.I.

Rev #	Date	Description

Job # 05310
CAD File
Drawn DLM Checked DEW
Date 5-10-06
Owner #
Ins. #

SYMBOL LEGEND AND INDEX SHEET

EE-001

Sheet of Sheets

GENERAL SHEET NOTES

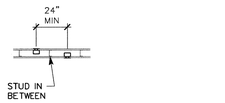
1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:

   1 – ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).
   2 – EQUIPMENT SHOP DRAWINGS.
   3 – FIELD INSTRUCTIONS.

2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.
3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.
4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.
5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
8. LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.

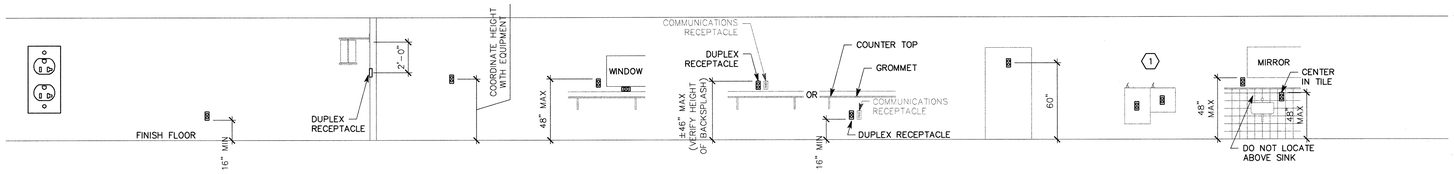
⬡SHEET KEYNOTES

1. LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.
3. LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY .5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.
4. LOCATE SMOKE DETECTOR ANYWHERE IN SHADED AREA.
5. LOCATE AT BOTTOM OF BEAMS IF EITHER D/H < .1 OR W/H < .4; OTHERWISE, LOCATE IN BEAM POCKET.



BOXES ON OPPOSITE SIDES OF WALL

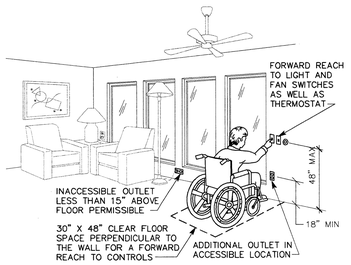
7 BOX MOUNTING DETAILS
NTS



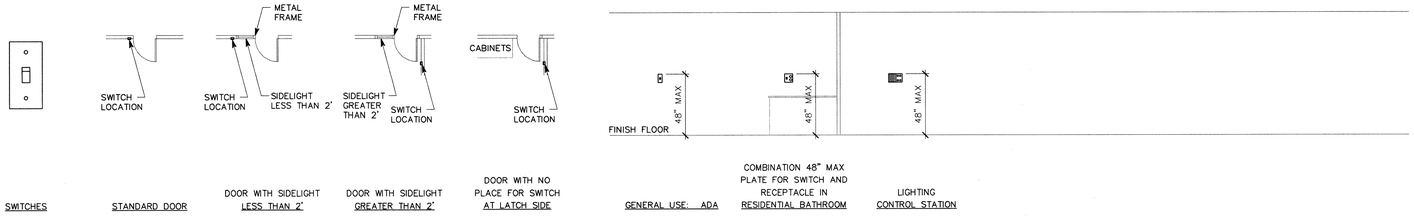
DUPLEX RECEPTACLES | GENERAL USE: NO SPECIAL REQUIREMENTS | WALL BRACKET TV | DEDICATED RECEPTACLE FOR SPECIAL EQUIPMENT | ABOVE COUNTER – TYPICAL | RECEPTACLES ABOVE OR BELOW COUNTER | FULL HEIGHT REFRIGERATOR | DRINKING FOUNTAIN | TILE WALLS

REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.

6 RECEPTACLE MOUNTING DETAILS
NTS

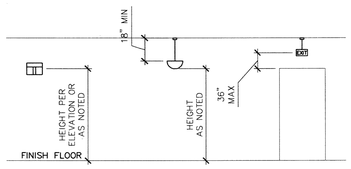


5 ADA DETAIL
NTS



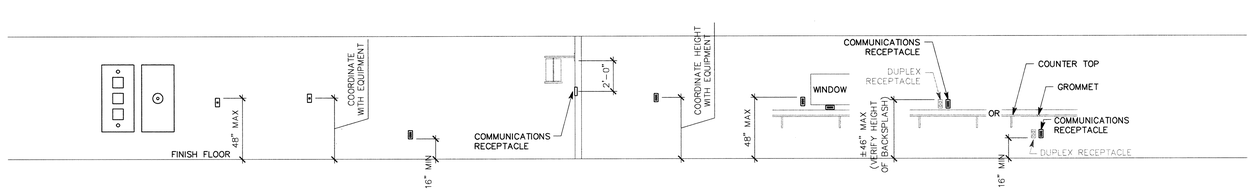
SWITCHES | STANDARD DOOR | DOOR WITH SIDELIGHT LESS THAN 2' | DOOR WITH SIDELIGHT GREATER THAN 2' | DOOR WITH NO PLACE FOR SWITCH AT LATCH SIDE | GENERAL USE: ADA | LIGHTING CONTROL STATION

4 SWITCH MOUNTING DETAILS
NTS



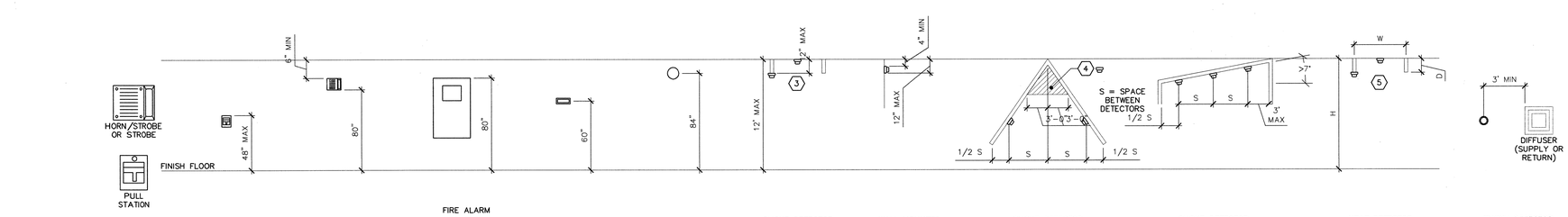
WALL MOUNTED LIGHT FIXTURE | PENDANT LIGHT FIXTURE | PENDANT EXIT SIGNS

3 LIGHTING MOUNTING DETAILS
NTS



COMMUNICATION RECEPTACLES | WALL PHONE | PAY PHONE | GENERAL USE: NO SPECIAL REQUIREMENTS | WALL BRACKET TV | DEDICATED RECEPTACLE FOR SPECIAL EQUIPMENT | ABOVE COUNTER – TYPICAL | RECEPTACLES ABOVE OR BELOW COUNTER

2 COMMUNICATION MOUNTING DETAILS
NTS



FIRE ALARM | PULL STATION | HORN, CHIME, OR STROBE | FIRE ALARM CONTROL PANEL "FCP" | FIRE SYSTEM ANNUNCIATOR "FSA" | BELL | SMOKE DETECTOR BETWEEN BEAMS | WALL MOUNTED SMOKE DETECTOR | SMOKE DETECTOR ON SLOPED CEILING (PEAKED) | SMOKE DETECTOR ON SLOPED CEILING (SHED) | HEAT DETECTOR BETWEEN BEAMS | SMOKE DETECTOR ADJACENT TO SUPPLY AIR

1 FIRE ALARM MOUNTING DETAILS
NTS

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TYPICAL MOUNTING HEIGHT DETAILS

EE-701
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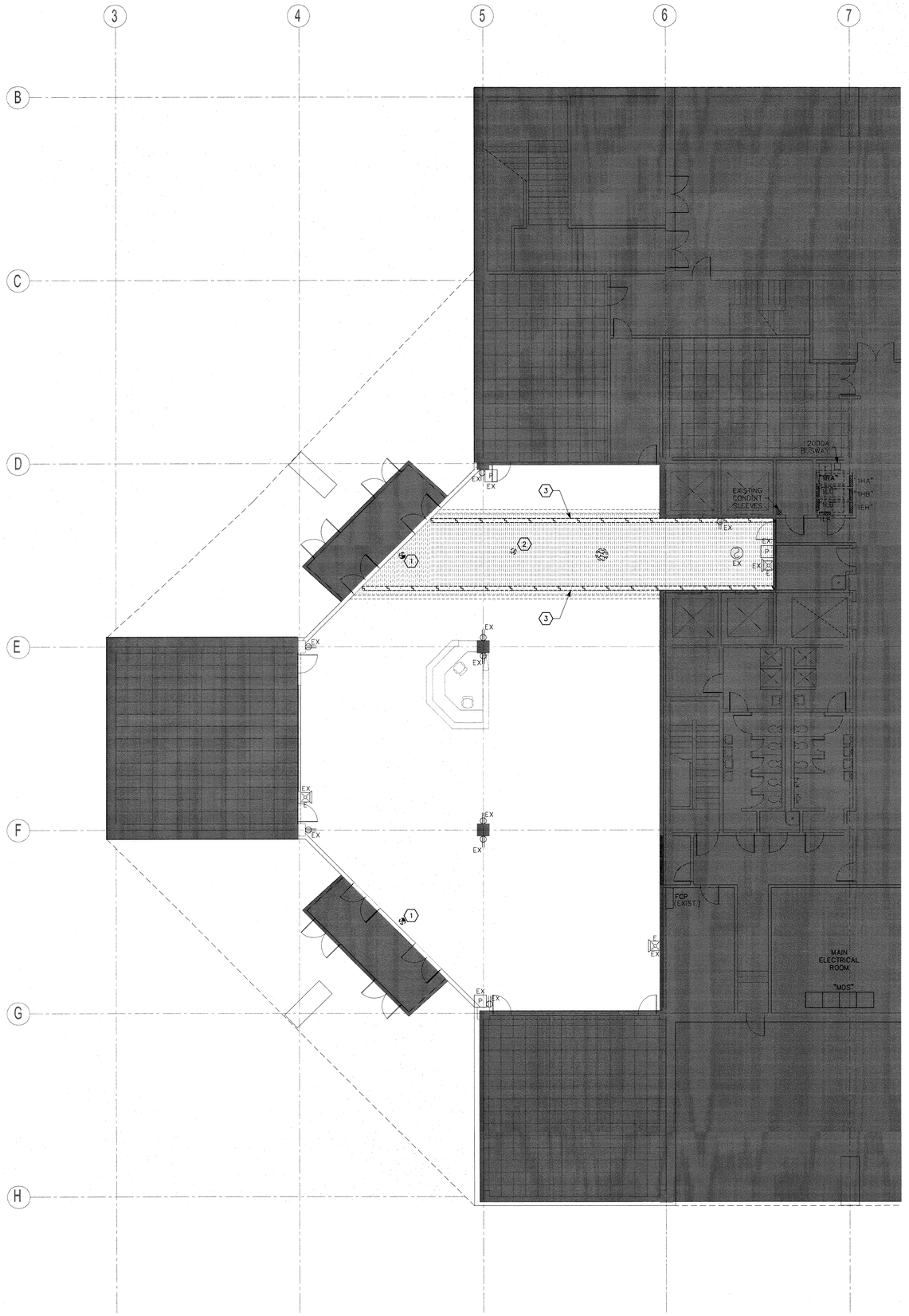

GENERAL SHEET NOTES

1. DISCONNECT FIRE ALARM DEVICES FROM REMOVED CEILING. TEMPORARILY SUPPORT DEVICES DURING CONSTRUCTION. PROTECT SMOKE DETECTOR FROM DUST, HOWEVER FIRE ALARM SYSTEM IS TO REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.
2. UNLESS OTHERWISE INDICATED, REMOVE ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHOWN DASHED. REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO THE PANELBOARD OF ORIGINATION.

⬡SHEET KEYNOTES

1. EXIT SIGN TO BE REMOVED AND REPLACED WITH NEW. EXISTING CIRCUIT TO REMAIN.
2. REMOVE ELECTRICAL HEATING UNIT.
3. REMOVE LIGHT FIXTURES.

1 MAIN LEVEL ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

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MAIN LEVEL
ELECTRICAL DEMOLITION PLAN

ED-101
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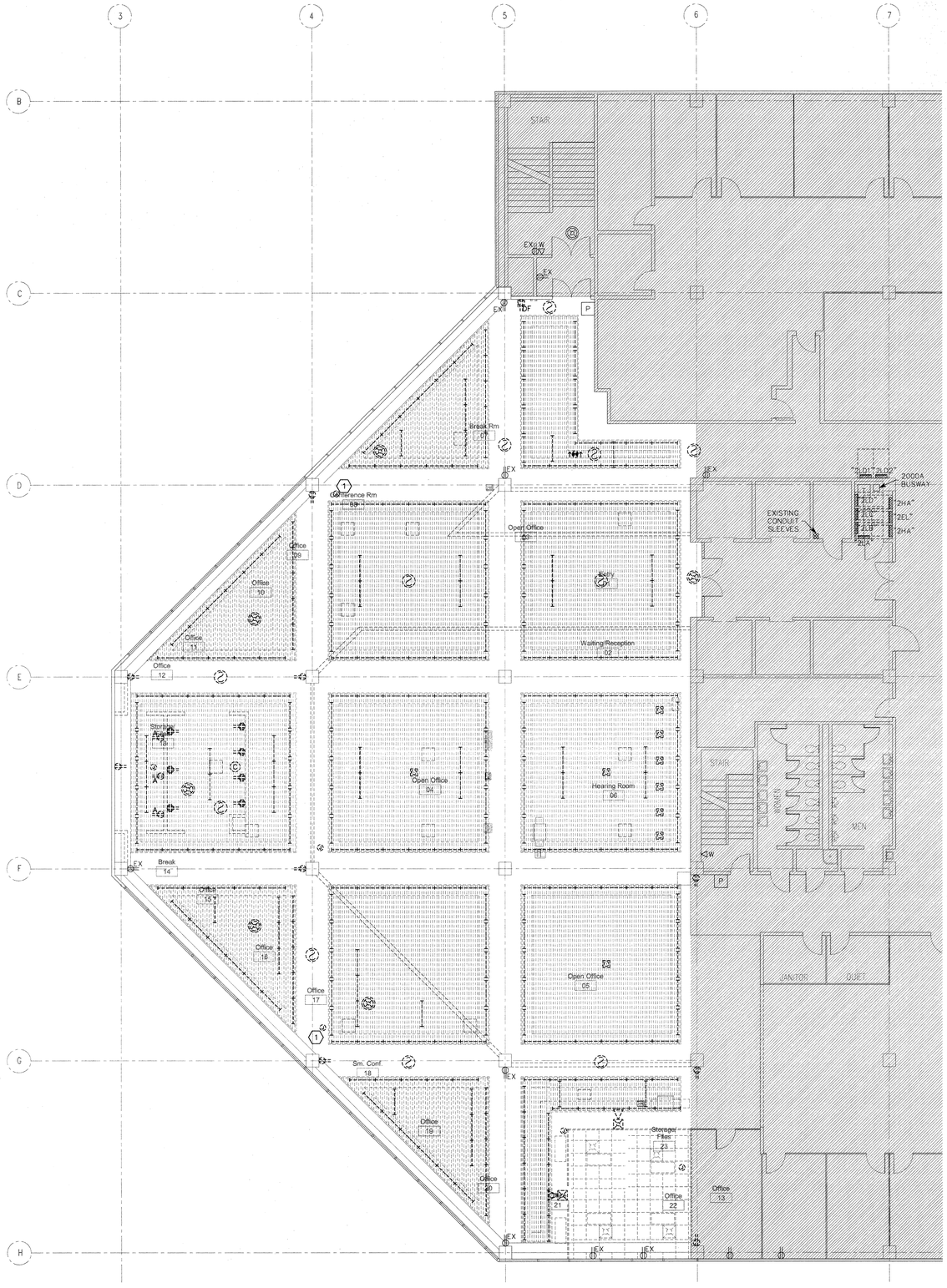

GENERAL SHEET NOTES

1. REMOVE THE FIRE ALARM DEVICES FROM THE REMOVED WALLS AND CEILINGS, WITH ASSOCIATED CONDUIT AND WIRING. HOWEVER, THE EXISTING FIRE ALARM DEVICES AND SYSTEM SHALL REMAIN ACTIVE THROUGHOUT DEMOLITION AND CONSTRUCTION UNTIL THE NEW SYSTEM IS TESTED AND OPERATIONAL. MAINTAIN ALL CLASS A FIRE ALARM INITIATING AND INDICATING LOOPS WHERE EXISTING DEVICES ARE REMOVED.
2. UNLESS OTHERWISE INDICATED, REMOVE ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHOWN DASHED. REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO THE PANELBOARD OF ORIGINATION.
3. REMOVE ALL WIRING FROM EXISTING DEVICES TO BE REMOVED FROM EXISTING UNDER FLOOR DUCTS FROM DEVICE TO PANELBOARD OF ORIGINATION. WIRES ARE NOT TO BE ABANDONED IN PLACE IN UNDER FLOOR DUCTS.

⬡SHEET KEYNOTES

1. REMOVE ELECTRICAL FROM HEATING UNIT.

1 SECOND LEVEL ELECTRICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

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SECOND LEVEL
ELECTRICAL DEMOLITION PLAN

ED-102

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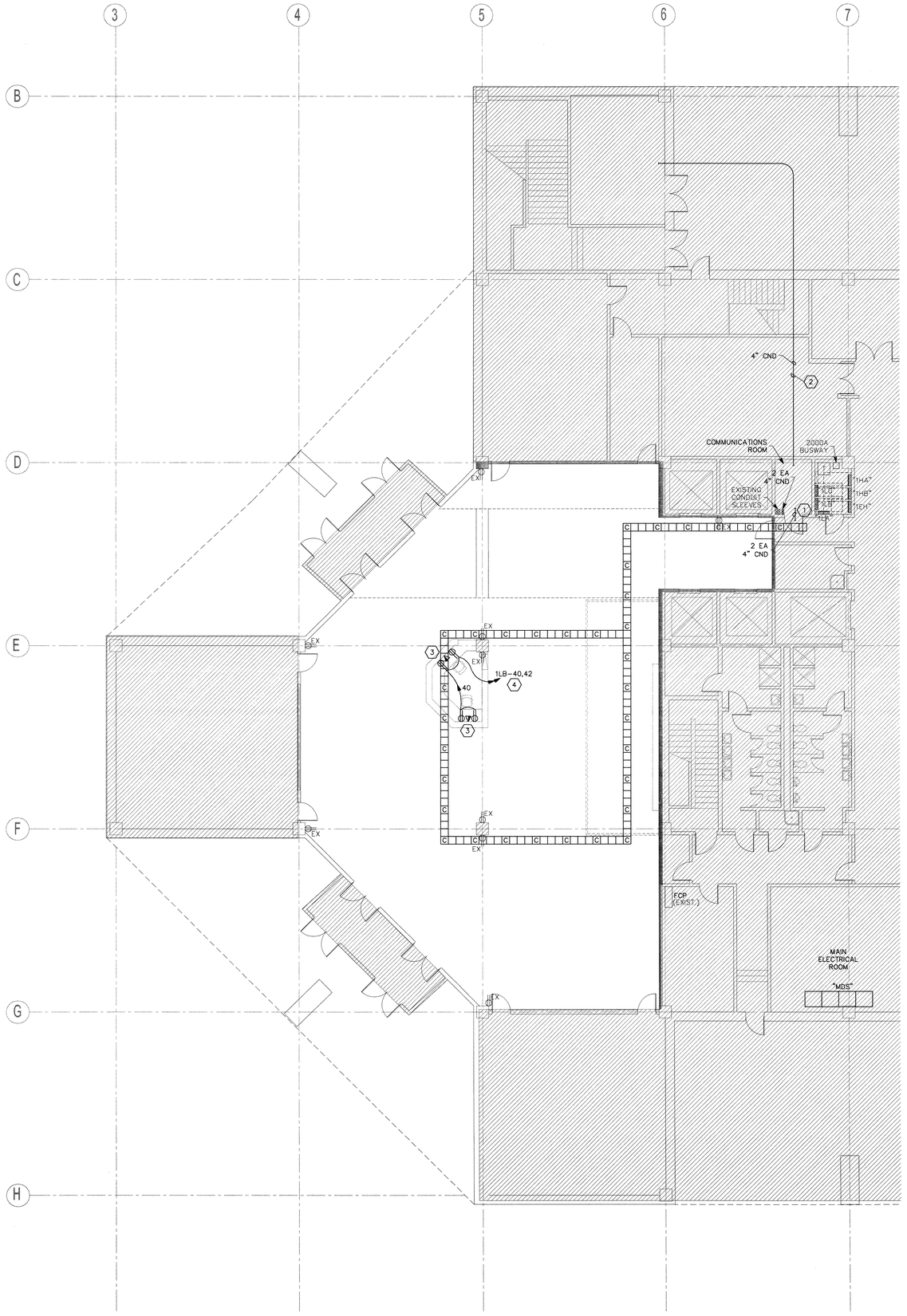

GENERAL SHEET NOTES

1. LOCATE CABLE TRAY ABOVE ACCESSIBLE CEILING TILE AND BELOW PIPING AND DUCT WORK SUCH THAT CEILING TILE CAN BE REMOVED AND TOP OF CABLE TRAY IS ACCESSIBLE.
2. COORDINATE ACTUAL CABLE TRAY ROUTING WITH DIV. 15 AND OTHER TRADES SO THAT CABLE TRAY IS ACCESSIBLE AND THE CABLE TRAY DOES NOT BLOCK ACCESS TO OTHER EQUIPMENT.
3. COORDINATE LAYOUT OF CABLE TRAY IN IT ROOMS WITH THE DFCM IT CABLING INSTALLER.
4. DO NOT SUPPORT ELECTRICAL CABLES AND RACEWAYS FROM CABLE TRAY. MAINTAIN AT LEAST 12" SEPARATION FROM CABLE TRAY TO POWER RACEWAYS OR CABLES AND LIGHT FIXTURES.
5. WHERE CABLE TRAY PASSES THROUGH FIRE-RATED WALLS, PROVIDE (3) 4" CND SLEEVES THROUGH WALL AND FIRE STOP AFTER CABLES ARE INSTALLED.
6. ROUTE CONDUIT STUBS TO CABLE TRAY SUCH THAT A MAXIMUM CABLE DISTANCE OF 250' IS TO EXCEEDED BETWEEN THE OUTLET AND THE NEAREST IT ROOM.

⬡SHEET KEYNOTES

1. PROVIDE 2 4" CND FROM CABLE TRAY TO BELOW GYP BOARD CEILING IN COMMUNICATIONS ROOM.
2. INSTALL 4" CND FROM 1ST FLOOR COMMUNICATIONS ROOM TO MAIN COMMUNICATIONS ROOM. INSTALL PULL STRING IN CONDUIT.
3. OUTLETS MOUNTED IN MILLWORK. COORDINATE WITH ARCHITECTURAL DETAILS AND MILLWORK INSTALLER. PART OF BID ALTERNATE #2.
4. ROUTE CIRCUITS THROUGH PARKING LEVEL P2 TO EXISTING PANEL "1LB". PART OF BID ALTERNATE #2.

1 MAIN LEVEL POWER PLAN
SCALE: 1/8" = 1'-0"

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MAIN LEVEL POWER PLAN

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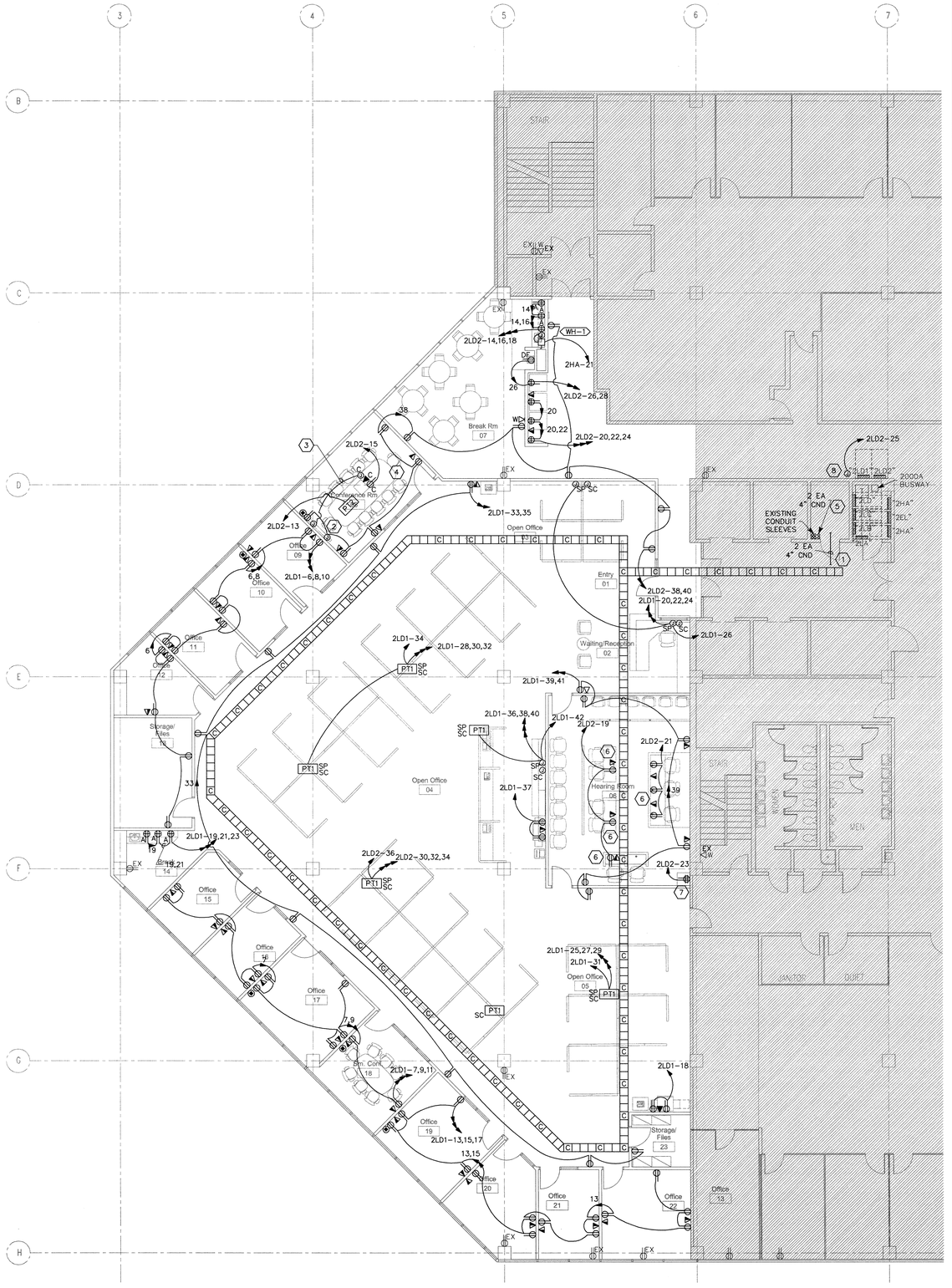

1 SECOND LEVEL POWER PLAN

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. LOCATE POKE-THROUGH BOXES TO BE ABOVE ACCESSIBLE CEILING. COORDINATE LOCATION WITH FURNITURE INSTALLERS LAYOUT. CORE DRILL HOLES SHALL BE MINIMUM 2'-0" APART.
2. LOCATE CABLE TRAY ABOVE ACCESSIBLE CEILING TILE AND BELOW PIPING AND DUCT WORK SUCH THAT CEILING TILE CAN BE REMOVED AND TOP OF CABLE TRAY IS ACCESSIBLE.
3. COORDINATE ACTUAL CABLE TRAY ROUTING WITH DIV. 15 AND OTHER TRADES SO THAT CABLE TRAY IS ACCESSIBLE AND THE CABLE TRAY DOES NOT BLOCK ACCESS TO OTHER EQUIPMENT.
4. COORDINATE LAYOUT OF CABLE TRAY IN IT ROOMS WITH THE DFCM IT CABLING INSTALLER.
5. DO NOT SUPPORT ELECTRICAL CABLES AND RACEWAYS FROM CABLE TRAY. MAINTAIN AT LEAST 12" SEPARATION FROM CABLE TRAY TO POWER RACEWAYS OR CABLES AND LIGHT FIXTURES.
6. WHERE CABLE TRAY PASSES THROUGH FIRE-RATED WALLS, PROVIDE (3) 4" CND SLEEVES THROUGH WALL AND FIRE STOP AFTER CABLES ARE INSTALLED.
7. ROUTE CONDUIT STUBS TO CABLE TRAY SUCH THAT A MAXIMUM CABLE DISTANCE OF 250' IS TO EXCEEDED BETWEEN THE OUTLET AND THE NEAREST IT ROOM.

⬡SHEET KEYNOTES

1. PROVIDE 2 4" CND FROM CABLE TRAY TO BELOW GYP BOARD CEILING IN COMMUNICATIONS ROOM.
2. PROVIDE CONNECTION TO MOTORIZED SCREEN.
3. 1.25" CND FOR VIDEO CABLE.
4. INSTALL CEILING OUTLET ADJACENT TO PROJECTOR, FLUSH WITH CEILING ON 6' WHIP FOR EASY RELOCATION. COORDINATE EXACT LOCATION WITH A/V INSTALLER.
5. INSTALL 2 4" CND SLEEVES BETWEEN 1ST AND 2ND FLOOR COMMUNICATION ROOMS.
6. OUTLETS MOUNTED IN MILLWORK. COORDINATE WITH ARCHITECTURAL DETAILS AND MILLWORK INSTALLER. PART OF BID ALTERNATE #1.
7. OUTLET FOR A/V RACK. COORDINATE LOCATION WITH A/V INSTALLER. PART OF BID ALTERNATE #1.
8. PROVIDE 120V CIRCUITS FOR MECHANICAL CONTROLS. COORDINATE EXACT LOCATION WITH CONTROLS CONTRACTOR.

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SECOND LEVEL POWER PLAN

EP-102

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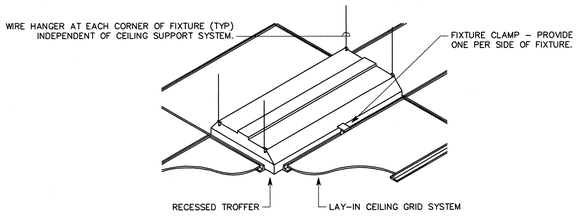
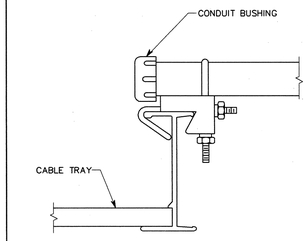


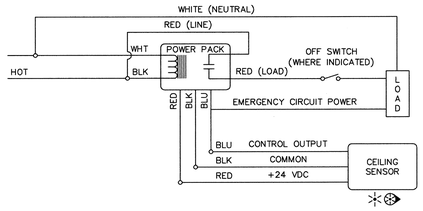
10 RECESSED FIXTURE MOUNTING DETAIL
NTS



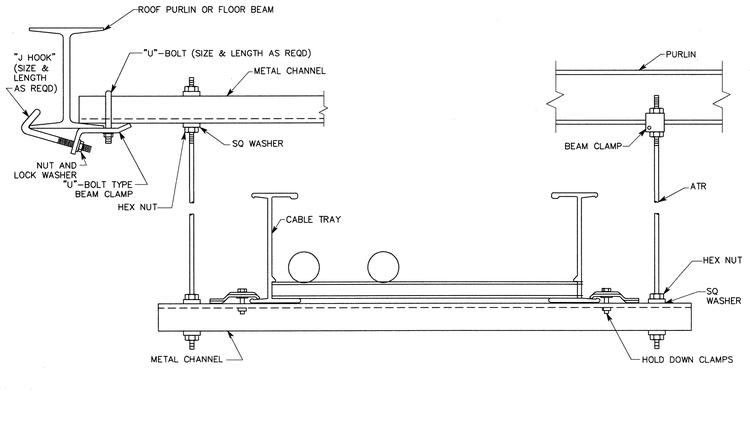
4 CONDUIT TO TRAY ADAPTER
NTS

GENERAL SHEET NOTES

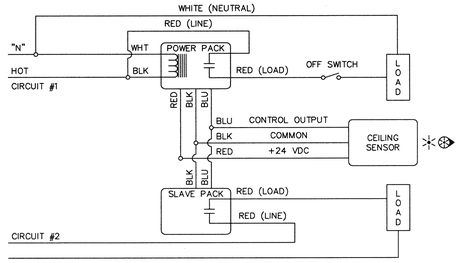
1. PLANS, IN GENERAL, SHOW CABLE TRAYS IN PLAN AND DO NOT DETAIL CHANGES IN ELEVATION. COORDINATE LAYOUT AND INSTALLATION OF CABLE TRAYS AND SUSPENSION SYSTEM WITH OTHER CONSTRUCTION ELEMENTS. INCLUDE TRANSITIONS, OFFSETS, AND CHANGES IN ELEVATION. COORDINATE ITEMS THAT PENETRATE CEILINGS ORE ARE SUPPORTED BY THEM, INCLUDING LIGHT FIXTURE, HVAC EQUIPMENT, FIRE SUPPRESSION SYSTEM AND PARTITION ASSEMBLIES.
2. PROVIDE FIRE STOPPING MATERIALS TO MAINTAIN FIRE RATINGS CONSISTENT WITH PENETRATED BARRIERS. PROVIDE SLEEVES FOR PENETRATION SLOTS/OPENINGS. MATCH CROSS SECTIONAL AREA OF CABLE TRAY. PROVIDE SEALING FILLERS



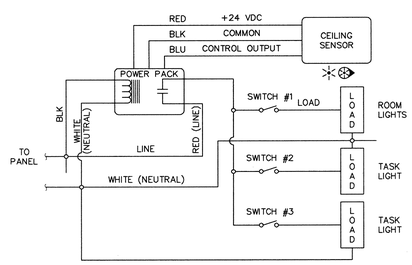
9 TYPICAL ROOM WITH ONE CEILING SENSOR, WITH OR WITHOUT WALL SWITCH
NO SCALE



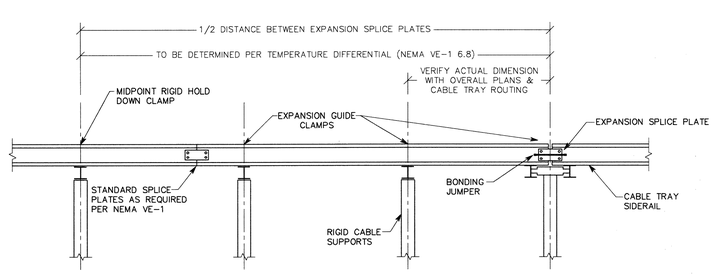
3 TYPICAL INDOOR CABLE TRAY MOUNTING DETAIL
NTS



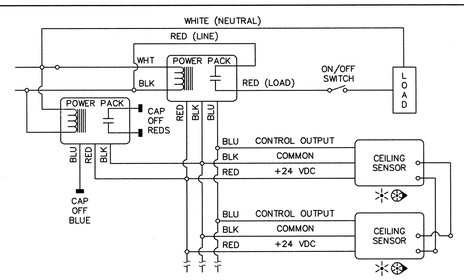
8 TYPICAL ROOM WITH ONE SENSOR CONTROLLING TWO CIRCUITS
NO SCALE



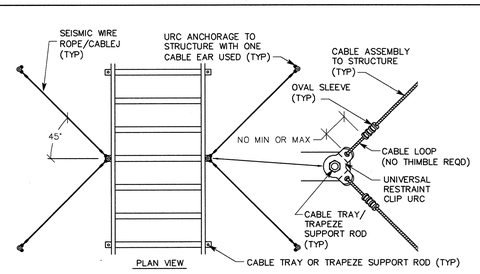
7 TYPICAL ROOM WITH ONE CEILING SENSOR, ONE CIRCUIT AND MULTIPLE SWITCHED LOADS
NO SCALE



2 TYPICAL EXPANSION SUPPORT DETAIL
NTS



6 TYPICAL ROOM WITH MULITPLE CEILING SENSORS
NO SCALE



1 SEISMIC WIRE ROPE/CABLEJ BRACING
NTS

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DETAILS

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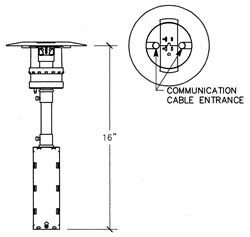
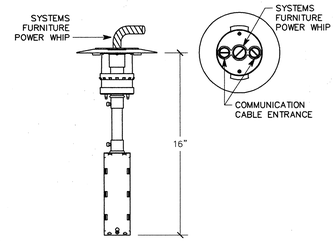
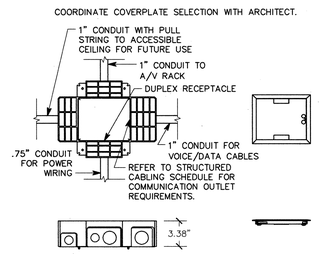


9 FIRE RATED POKE-THRU #2 PT2
NTS



8 FIRE RATED POKE-THRU #1 PT1
NTS



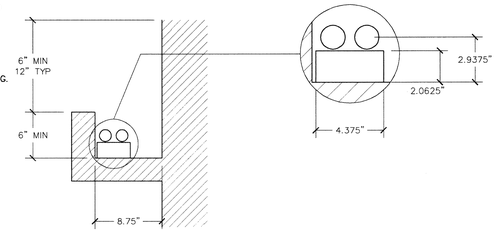
5 FLOOR BOX #4 FB4
NTS

⬡SHEET KEYNOTES

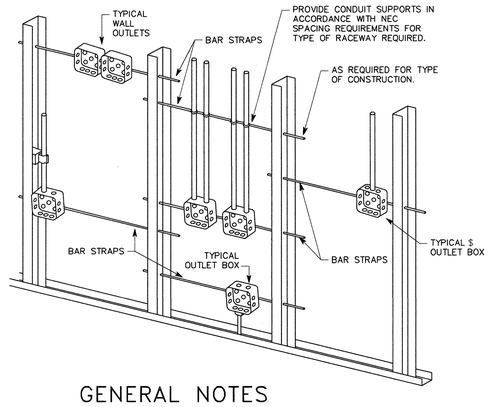
1. TYPICAL VOICE/DATA OUTLETS. PROVIDE 4" SQUARE BOX WITH SINGLE-GANG MUD RING AND BLANK COVER PLATE.
2. STUB CONDUIT ALL THE WAY TO CABLE TRAY. PROVIDE INSULATED THROATS.
3. TYPICAL SYSTEMS FURNITURE COMMUNICATION FEED (FLOOR OR WALL AS INDICATED). PROVIDE DEEP BOX AND COORDINATE COVER PLATE TYPE WITH OWNER'S VOICE/DATA CABLING INSTALLED.
4. TYPICAL FLOORBOX OR POKE-THROUGH VOICE/DATA OUTLETS.

GENERAL NOTES

1. BASED ON LITHONIA STAGGERED STRIP LIGHT, FIXTURE #SS. OTHER FIXTURES MAY REQUIRE SLIGHT MODIFICATIONS TO COVE DIMENSIONS PARTICULARLY TO HEIGHT.
2. STAGGERED FIXTURE IS 2-LAMP, 52" LONG.
3. INSIDE OF COVE PAINTED BRIGHT WHITE.



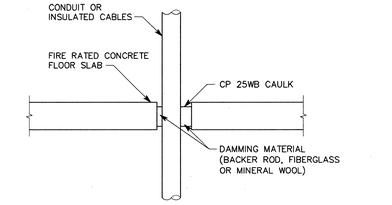
11 STANDARD STRIP LIGHT COVE DETAIL
SCALE: 1"=1'-0"



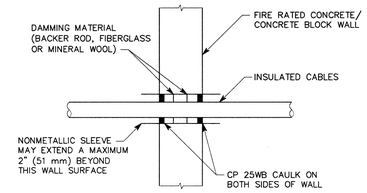
GENERAL NOTES

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH IBC 711.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE.
5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.

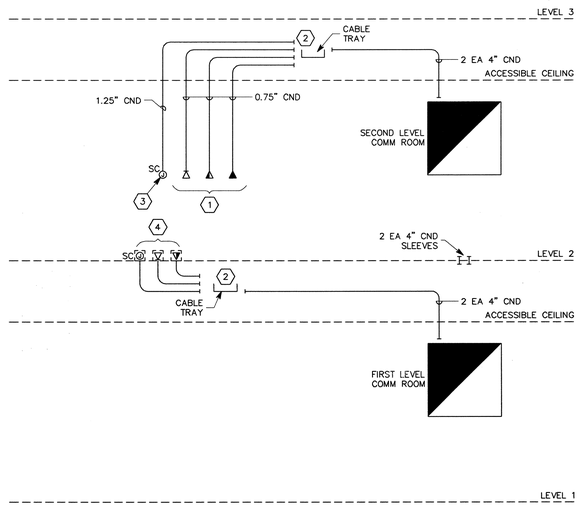
7 TYPICAL ROUGH-IN REQUIREMENTS DETAIL
NTS



4 TYPICAL FIRE STOP FOR CABLES/ CONDUIT THROUGH CONCRETE FLOORING
NTS

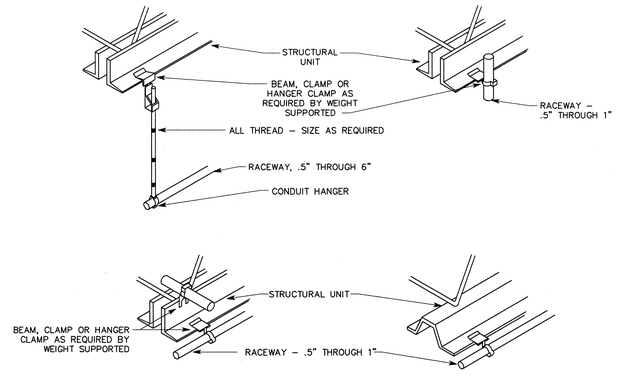


3 TYPICAL FIRE STOP FOR CABLES/ CONDUIT THROUGH CONCRETE WALLS
NTS

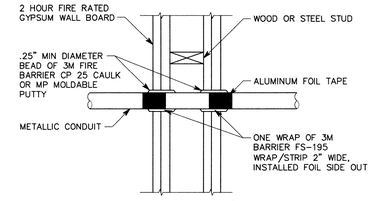


10 TYPICAL VOICE/DATA RACEWAY DETAIL
NTS

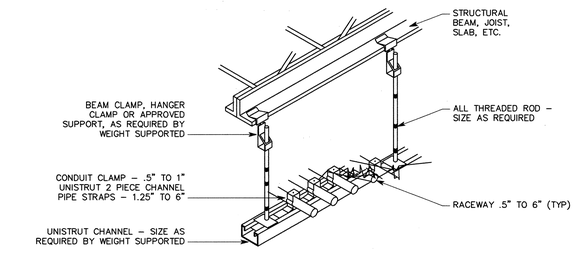
NOTE: TIE WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.



6 TYPICAL RACEWAY SUPPORT METHODS DETAIL
NTS



2 FIRE STOP FOR METAL CONDUIT THROUGH GYPSUM WALL BOARD
NTS



1 TYPICAL CONDUIT RACK DETAIL
NTS

VCBO
ARCHITECTURE
VALENTINER
CRANE
BRUNJES
ONYON

No. 181563
DAVID E. WESEMANN
5-16-06
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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah

T.I.

Rev #	Date	Description

Job #	05310
CAD File	
Drawn	DLM Checked DEW
Date	5-10-06
Owner #	
Ins. #	

DETAILS

EP-502

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EXISTING PANEL "2LD1"

VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE | PANEL SIZE & TYPE: 22" W x 6" D, BOLT-ON | MAIN SIZE & TYPE: 225 AMPERE MAIN CB | LOCATION: | CABINET: | NOTES:

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1		0.8		EX. OUTLETS	0.8	1.0			0.2	EX. OUTLETS		0.2		20	1	2
3	20	1		0.8		EX. OUTLETS	0.8		1.0		0.2	EX. OUTLETS		0.2		20	1	4
5	20	1		0.8		EX. OUTLETS	0.8			1.7	0.9	OFFICE CO'S		0.9		20	1	6
7	20	1		1.2		OFFICE CO'S	1.2	2.4			1.2	OFFICE CO'S		1.2		20	1	8
9	20	1		0.9		OFFICE CO'S	0.9		1.5		0.6	OFFICE CO'S		0.6		20	1	10
11	20	1		0.4		SMALL CONF ROOM CO'S	0.4			0.4	0.0	EX. SPARE				20	1	12
13	20	1		0.6		OFFICE CO'S	0.6	0.6			0.0	EX. SPARE				20	1	14
15	20	1		1.2		OFFICE CO'S	1.2		1.2		0.0	EX. SPARE				20	1	16
17	20	1		0.8		OFFICE CO'S	0.8			1.8	1.0	COPIER			1.0	20	1	18
19	20	1		0.2		COUNTER CO'S	0.2	0.6			0.4	SYSTEM FURNITURE		0.4		20	1	20
21	20	1		0.2		COUNTER CO'S	0.2		0.6		0.4	SYSTEM FURNITURE		0.4		20	1	22
23	20	1		0.2		COUNTER CO'S	0.2			0.6	0.4	SYSTEM FURNITURE		0.4		20	1	24
25	20	1		0.4		SYSTEM FURNITURE	0.4	0.8			0.4	SYSTEM FURNITURE		0.4		20	1	26
27	20	1		0.4		SYSTEM FURNITURE	0.4		1.0		0.6	SYSTEM FURNITURE		0.6		20	1	28
29	20	1		0.4		SYSTEM FURNITURE	0.4			1.0	0.6	SYSTEM FURNITURE		0.6		20	1	30
31	20	1		0.4		SYSTEM FURNITURE	0.4	1.0			0.6	SYSTEM FURNITURE		0.6		20	1	32
33	20	1		0.8		OPEN OFFICE CO'S	0.8		1.4		0.6	SYSTEM FURNITURE		0.6		20	1	34
35	20	1		0.8		OPEN OFFICE CO'S	0.8			1.0	0.2	SYSTEM FURNITURE		0.2		20	1	36
37	20	1	1.0			COPIER	1.0	1.2			0.2	SYSTEM FURNITURE		0.2		20	1	38
39	20	1		0.6		HEARING ROOM CO'S	0.6		0.8		0.2	SYSTEM FURNITURE		0.2		20	1	40
41	20	1		0.6		HEARING ROOM CO'S	0.6			0.8	0.2	SYSTEM FURNITURE		0.2		20	1	42
TOTALS:						CONNECTED kVA PER PHASE		8	8	7						CONNECTED TOTAL kVA		22
						CONNECTED AMPS PER PHASE		63	63	61						CONNECTED AVERAGE AMPS PER PHASE		62

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 0kVA @125% = 0 kVA | ALL OTHER LOADS @100% = 2 kVA | DIVERSIFIED TOTAL kVA = 17

RECEPTACLES 10kVA @100% = 10 kVA | 25% OF LARGEST MOTOR = 0 kVA | AVERAGE AMPS PER PHASE = 48

REMAINDER 1kVA @ 50% = 5 kVA

EXISTING PANEL "1HB"

VOLTS/PHASE/WIRE: 277/480 V, 3 PH 4 WIRE | PANEL SIZE & TYPE: 22" W x 6" D, BOLT-ON | MAIN SIZE & TYPE: 100 AMPERE MAIN LUG | LOCATION: | CABINET: | NOTES:

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1	2.4			EX. SOFFIT LIGHTS	3.0	5.2			3.5	EX. SOFFIT LIGHTS	2.8			20	1	2
3	20	1	2.4			EX. SOFFIT LIGHTS	3.0		5.2		3.5	EX. SOFFIT LIGHTS	2.8			20	1	4
5	20	1	2.4			EX. SOFFIT LIGHTS	3.0			4.8	3.0	EX. SOFFIT LIGHTS	2.4			20	1	6
7	20	1	2.4			EX. SOFFIT LIGHTS	3.0	4.8			3.0	EX. SOFFIT LIGHTS	2.4			20	1	8
9	20	1	2.4			EX. SOFFIT LIGHTS	3.0		5.2		3.5	EX. SOFFIT LIGHTS	2.8			20	1	10
11	20	1	2.4			EX. SOFFIT LIGHTS	3.0			5.2	3.5	EX. SOFFIT LIGHTS	2.8			20	1	12
13	20	1	2.2			LOBBY DOWN LIGHTS	2.8	5.0			3.5	EX. SOFFIT LIGHTS	2.8			20	1	14
15	20	1	2.7			LOBBY COVE LIGHTS	3.4		2.7		0.0	EX. SPARE				20	1	16
17	20	1	1.2			LOBBY PENDANT LIGHTS	1.5			1.2	0.0	EX. SPARE				20	1	18
19	20	1				EX. SPACE	0.0	0.0			0.0	EX. SPACE				20	1	20
21	20	1				EX. SPACE	0.0		0.0		0.0	EX. SPACE				20	1	22
23	20	1				EX. SPACE	0.0			0.0	0.0	EX. SPACE				20	1	24
TOTALS:						CONNECTED kVA PER PHASE		15	13	11						CONNECTED TOTAL kVA		39
						CONNECTED AMPS PER PHASE		54	47	40						CONNECTED AVERAGE AMPS PER PHASE		47

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 39kVA @125% = 49 kVA | ALL OTHER LOADS @100% = 0 kVA | DIVERSIFIED TOTAL kVA = 49

RECEPTACLES 0kVA @100% = 0 kVA | 25% OF LARGEST MOTOR = 0 kVA | AVERAGE AMPS PER PHASE = 59

REMAINDER 0kVA @ 50% = 0 kVA

EXISTING PANEL "1EH"

VOLTS/PHASE/WIRE: 277/480 V, 3 PH 4 WIRE | PANEL SIZE & TYPE: 22" W x 6" D, BOLT-ON | MAIN SIZE & TYPE: 100 AMPERE MAIN LUG | LOCATION: | CABINET: | NOTES:

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1	3.6			EX. LIGHTS 1ST FLOOR	4.5	5.2			2.0	EX. LIGHTS 2ND FLOOR	1.6			20	1	2
3	20	1	4.4			EX. LIGHTS 1ST FLOOR	5.5		5.7		1.6	EX. LIGHTS 2ND FLOOR	1.3			20	1	4
5	20	1	2.9			EX. LIGHTS STAIRS	3.6			5.9	3.8	EX. LIGHTS STAIR	3.0			20	1	6
7	20	1	1.5			EX. LIGHTS 3RD FLOOR	1.9	2.6			1.4	EM LIGHTS 2ND FLR OFFICE	1.1			20	1	8
9	20	1	1.7			EX. LIGHTS 3RD FLOOR	2.1		3.2		1.9	EM LIGHTS 1ST FLR LOBBY	1.5			20	1	10
11	20	1			1.5	EX. VESTIBULE HEAT TAPE	1.5			4.5	3.0	EX. A/C UNIT			3.0	20	3	12
13	20	1			1.5	EX. VESTIBULE HEAT TAPE	1.5	4.5			3.0	–			3.0	–	–	14
15	20	3			3.0	EX. A/C UNIT	3.0		6.0		3.0	–			3.0	–	–	16
17	–	–			3.0	–	3.0			3.3	0.4	EM CORR LIGHTS 2ND FLR	0.3			20	1	18
19	–	–			3.0	–	3.0	3.0			0.0	EX. SPACE				20	1	20
21	20	1				EX. SPACE	0.0		0.0		0.0	EX. SPACE				20	1	22
23	20	1				EX. SPACE	0.0			0.0	0.0	EX. SPACE				20	1	24
TOTALS:						CONNECTED kVA PER PHASE		15	15	14						CONNECTED TOTAL kVA		44
						CONNECTED AMPS PER PHASE		55	54	50						CONNECTED AVERAGE AMPS PER PHASE		53

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 23kVA @125% = 29 kVA | ALL OTHER LOADS @100% = 21 kVA | DIVERSIFIED TOTAL kVA = 50

RECEPTACLES 0kVA @100% = 0 kVA | 25% OF LARGEST MOTOR = 0 kVA | AVERAGE AMPS PER PHASE = 60

REMAINDER 0kVA @ 50% = 0 kVA

EXISTING PANEL "2LD2"

VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE | PANEL SIZE & TYPE: 22" W x 6" D, BOLT-ON | MAIN SIZE & TYPE: 225 AMPERE MAIN LUG | LOCATION: | CABINET: | NOTES:

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1		0.2		EX. OUTLETS	0.2	1.0			0.8	EX. OUTLETS		0.8		20	1	2
3	20	1		0.2		EX. OUTLETS	0.2		0.8		0.6	EX. CONF ROOM		0.6		20	1	4
5	20	1		0.2		EX. OUTLETS	0.2			1.0	0.8	EX. OFFICE CO'S		0.8		20	1	6
7	20	1		0.6		EX. OUTLETS	0.6	0.8			0.2	EX. OUTLETS		0.2		20	1	8
9	20	1		0.4		EX. POWER POLE	0.4		0.6		0.2	EX. OUTLETS		0.2		20	1	10
11	20	1		0.4		EX. POWER POLE	0.4			0.8	0.4	EX. OUTLETS		0.4		20	1	12
13	20	1		0.2		CONF ROOM FLOOR BOX	0.2	0.4			0.2	BREAK ROOM GFCI		0.2		20	1	14
15	20	1	0.5			CONF ROOM PROJECTOR	0.5		0.7		0.2	BREAK ROOM GFCI		0.2		20	1	16
17	20	1				EX. SPARE	0.0			0.2	0.2	BREAK ROOM GFCI		0.2		20	1	18
19	20	1	0.6			HEARING ROOM DESK CO'S	0.6	1.6			1.0	VENDING MACHINE			1.0	20	1	20
21	20	1	0.6			HEARING ROOM DESK CO'S	0.6		1.6		1.0	VENDING MACHINE			1.0	20	1	22
23	20	1	0.4			HEARING ROOM A/V RACK	0.4			1.4	1.0	VENDING MACHINE			1.0	20	1	24
25	20	1		0.5		CONTROL POWER	0.5	1.0			0.5	DRINKING FOUNTAIN			0.5	20	1	26
27	20	1				EX.SPARE	0.0		1.0		1.0	VENDING MACHINE			1.0	20	1	28
29	20	1				EX.SPARE	0.0			0.4	0.4	SYSTEM FURNITURE		0.4		20	1	30
31	20	1				EX.SPARE	0.0	0.4			0.4	SYSTEM FURNITURE		0.4		20	1	32
33	20	1				EX.SPARE	0.0		0.4		0.4	SYSTEM FURNITURE		0.4		20	1	34
35	20	1				EX.SPARE	0.0			0.4	0.4	SYSTEM FURNITURE		0.4		20	1	36
37	20	1				EX.SPARE	0.0	0.9			0.9	CONF. ROOM CO'S		0.9		20	1	38
39	20	1				EX.SPARE	0.0		1.2		1.2	BREAK RM. HALLWAY CO'S		1.2		20	1	40
41	20	1				EX.SPARE	0.0			0.0	0.0	EX. SPARE				20	1	42
TOTALS:						CONNECTED kVA PER PHASE		6	6	4						CONNECTED TOTAL kVA		17
						CONNECTED AMPS PER PHASE		51	53	35						CONNECTED AVERAGE AMPS PER PHASE		46

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 0kVA @125% = 0 kVA | ALL OTHER LOADS @100% = 6 kVA | DIVERSIFIED TOTAL kVA = 16

RECEPTACLES 10kVA @100% = 10 kVA | 25% OF LARGEST MOTOR = 0 kVA | AVERAGE AMPS PER PHASE = 45

REMAINDER 1kVA @ 50% = 1 kVA

EXISTING PANEL "2HA"

VOLTS/PHASE/WIRE: 277/480 V, 3 PH 4 WIRE | PANEL SIZE & TYPE: 22" W x 6" D, BOLT-ON | MAIN SIZE & TYPE: 400 AMPERE MAIN LUG | LOCATION: | CABINET: | NOTES:

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS

CKT	OCP		LOAD (kVA)			DESCRIPTION	LCL	PHASE LOAD			LCL	DESCRIPTION	LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR		kVA	A	B	C	kVA		LTG	CO	PWR	AMP	POLE	NO
1	20	1	2.6			EX. LIGHTS RM 205	3.3	2.9			0.4	CORRIDOR LIGHTS	0.3			20	1	2
3	20	1	3.6			EX. LIGHTS RM 206	4.5		7.1		4.4	EX. FLOOD LIGHTS	3.5			20	1	4
5	20	1	3.4			EX. LIGHTS NE	4.3			5.8	3.0	OFFICE LIGHTS	2.4			20	1	6
7	20	1	3.6			EX. LIGHTS SE	4.5	5.7			2.6	OFFICE LIGHTS	2.1			20	1	8
9	20	1	3.4			EX. LIGHTS ROOM 212	4.3		5.5		2.6	OFFICE LIGHTS	2.1			20	1	10
11	20	1	2.6			EX. LIGHTS ROOM 220	3.3			5.1	3.1	OFFICE LIGHTS	2.5			20	1	12
13	20	1	2.2			EX. LIGHTS SE	2.8	4.2			2.5	OFFICE LIGHTS	2.0			20	1	14
15	20	1	2.7			EX LIGHTS ROOM 224	3.4		5.4		3.4	EX. CORRIDOR LIGHTS	2.7			20	1	16
17	20	1	1.6			EX. LIGHTS RESTROOMS	2.0			4.6	3.0	EX. A/C UNIT			3.0	20	1	18
19	20	1			3.0	EX. LOAD	3.0	6.0			3.0	EX. SOUTH A/C			3.0	20	1	20
21	20	2			1.0	WATER HEATER	1.0		4.0		3.0	EX. NORTH A/C			3.0	20	1	22
23	–	–			1.0	–	1.0			1.0	0.0	EX.SPACE				20	1	24
25	20	3			3.0	EX. LTG MANAGEMENT	3.0	6.0			3.0	EX. LOAD				20	3	26
27	–	–			3.0	–	3.0		6.0		3.0	–				3.0	–	28
29	–	–			3.0	–	3.0			6.0	3.0	–				3.0	–	30
31	20	1				EX. SPACE	0.0	0.0			0.0	EX. SPACE				20	1	32
33	20	1				EX. SPACE	0.0		0.0		0.0	EX. SPACE				20	1	34
35	20	1				EX. SPACE	0.0			0.0	0.0	EX. SPACE				20	1	36
37	20	1				EX. SPACE	0.0	33.0			33.0	EX. TRANSFORMER				33.0	150	3
39	20	1				EX. SPACE	0.0		33.0		33.0	–				33.0	–	40
41	20	1				EX. SPACE	0.0			33.0	33.0	–				33.0	–	42
TOTALS:						CONNECTED kVA PER PHASE		58	61	56						CONNECTED TOTAL kVA		174
						CONNECTED AMPS PER PHASE		209	220	200						CONNECTED AVERAGE AMPS PER PHASE		210

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 43kVA @125% = 54 kVA | ALL OTHER LOADS @100% = 131 kVA | DIVERSIFIED TOTAL kVA = 185

RECEPTACLES 0kVA @100% = 0 kVA | 25% OF LARGEST MOTOR = 0 kVA | AVERAGE AMPS PER PHASE = 223

REMAINDER 0kVA @ 50% = 0 kVA

EQUIPMENT SCHEDULE

MARK	QTY	ITEM DESCRIPTION	LOAD DATA							WIRE AND CONDUIT SIZE	OVERCURRENT PROTECTION			DISCONNECT			STARTER DATA														NOTES	MARK
			HP	kW	MCA	FLA	VOLT	PH	Hz		FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	SIZE	SPEED	CTRL VOLT	SELECTOR SWITCH	PUSH BUTTON	PILOT LAMP	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	PHASE FAILURE RELAY	SCHEMATIC REFERENCE	REMOTE CTRL		
WH-1		WATER HEATER		2.0			480	1	60	2 #12, #12 GR 0.75" C.	E	20A/2P CB	PANEL	E	30A/2P NO FUSE	ADJ. TO EQIP.	Q															WH-1

EQUIPMENT SCHEDULE KEY

E	DIVISION 16
Q	FURNISHED WITH THE EQUIPMENT
*	COORDINATE WITH THE DIVISION 15 TEMPERATURE CONTROL INSTALLER
**	AUTOMATIC CONTROL WIRING BY DIVISION 15

GENERAL SHEET NOTES

1. PANELS ARE EXISTING WITH EXISTING AND NEW CIRCUITS AS INDICATED.

VCBO
ARCHITECTURE
VALENTINER
CRANE
BRUNJES
ONYON

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah
T.I.

Rev #	Date	Description

Job # 05310
CAD File
Drawn DLM Checked DEW
Date 5-10-06
Owner #
Ins. #

PANEL AND EQUIPMENT SCHEDULES

EP-601

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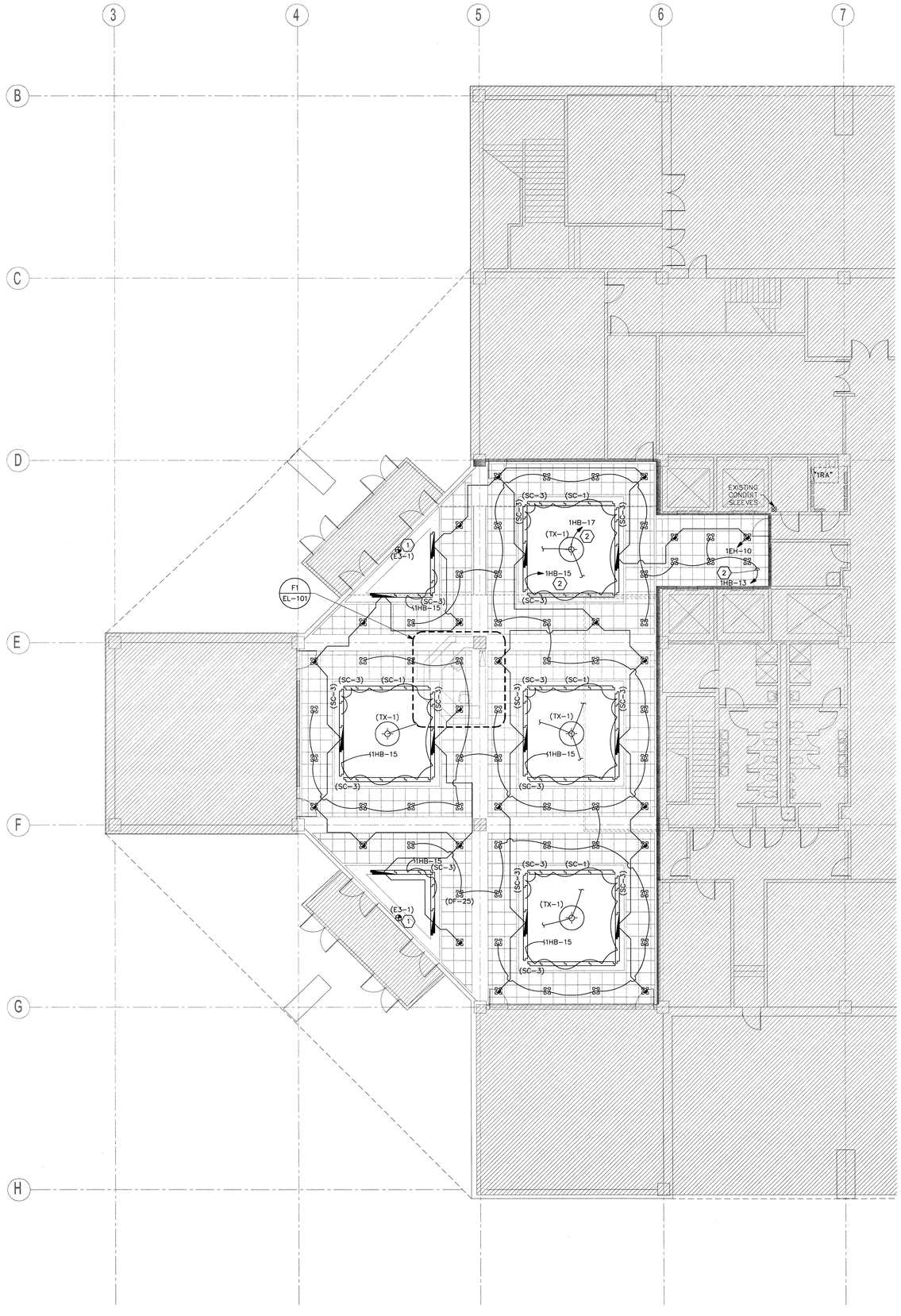

SHEET KEYNOTES

1. REMOVE AND REPLACE EXISTING EXIT SIGN. CONNECT NEW EXIT SIGN TO EXISTING CIRCUIT.
2. CIRCUIT THROUGH EXISTING RELAY PANEL IN ELECTRICAL ROOM. PROVIDE PROGRAMMING FOR RELAYS. COORDINATE RELAY CONTROL WITH OWNER.
3. CIRCUIT UNDER CABINET FIXTURES WITH NEAREST OUTLET CIRCUIT. COORDINATE MOUNTING WITH ARCHITECTURAL DETAILS AND MILLWORK INSTALLER. PART OF BID ALTERNATE #2.
4. PROVIDE TRANSFORMER FOR LOW VOLTAGE TUBE LIGHTS. CIRCUIT WITH OUTLETS. COORDINATE MOUNTING WITH ARCHITECTURAL DETAILS AND MILLWORK INSTALLER. PART OF BID ALTERNATE #2.

F1 ENLARGED SECURITY DESK
SCALE: 1/8" = 1'-0"

1 MAIN LEVEL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

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DFCM Project # 06187310
Heber M. Wells Building Remodel
Salt Lake City, Utah

T.I.

Rev #	Date	Description

Job # 05310
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Ins. #

MAIN LEVEL
LIGHTING PLAN

EL-101
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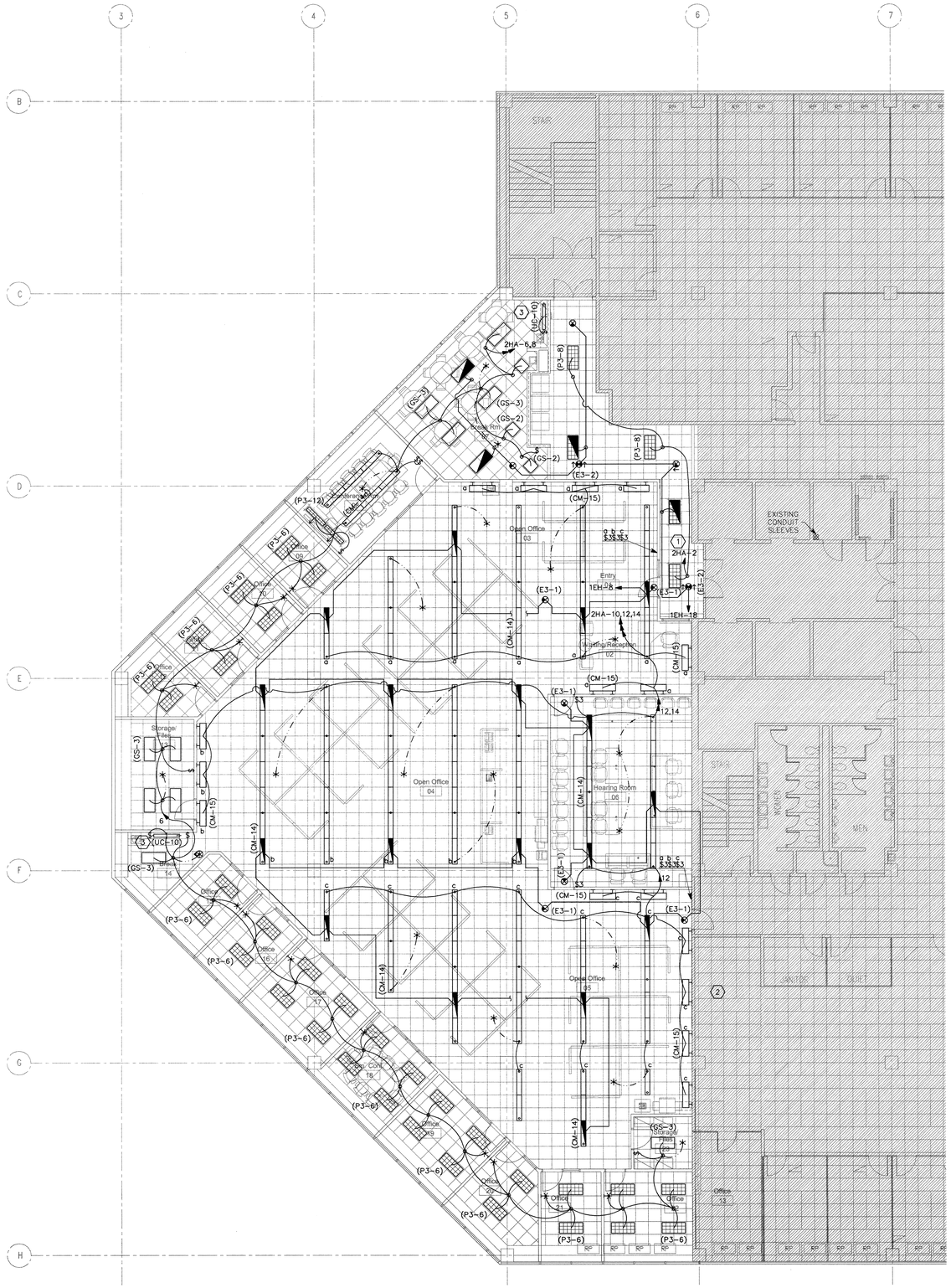

SHEET KEYNOTES

1. CIRCUIT THROUGH EXISTING RELAY PANEL IN ELECTRICAL ROOM. PROVIDE PROGRAMMING FOR RELAYS. COORDINATE RELAY CONTROL WITH OWNER.
2. EXISTING FIXTURES IN THIS AREA TO REMAIN. RELOCATE AND RE-SUPPORT FIXTURES AS REQUIRED TO COORDINATE WITH CHANGES TO CEILING.
3. CIRCUIT UNDERCABINET LIGHT WITH COUNTER OUTLETS.

1 SECOND LEVEL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

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SECOND LEVEL LIGHTING PLAN

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EXISTING RELAY PANEL

RELAY CABINET: "1RA"

RELAY #	PANEL CIRCUIT #	CONTROL GROUP	CONTROL METHOD	LOAD DESCRIPTION
1	EX.	EX.	EX.	EXISTING LOAD
2	1HB-13	A	1	LOBBY DOWNLIGHTS
3	1HB-15	A	1	LOBBY COVE LIGHTS
4	1HB-17	A	1	LOBBY PENDANTS
5				EX. SPARE RELAY
6				EX. SPARE RELAY
7				EX. SPARE RELAY
8				EX. SPARE RELAY
9				EX. SPARE RELAY
10				EX. SPARE RELAY
11				EX. SPARE RELAY
12				EX. SPARE RELAY
13				EX. SPARE RELAY
14				EX. SPARE RELAY
15				EX. SPARE RELAY
17				EX. SPARE RELAY
18				EX. SPARE RELAY
19				EX. SPARE RELAY
20				EX. SPARE RELAY
21				EX. SPARE RELAY
22				EX. SPARE RELAY
23				EX. SPARE RELAY
24				EX. SPARE RELAY

LIGHTING CONTROL GROUPS

A	LOBBY AND COMMON AREAS

LIGHTING CONTROL METHODS

1	ON/OFF WITH OCCUPIED/UNOCCUPIED MODE

LIGHTING FIXTURE SCHEDULE

NOTE TO BIDDERS: COMPLY WITH SECTIONS 16511, 16521, AND 16570 OF THE SPECIFICATIONS.
REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT, HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES. UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE.

SYMBOL MARK	FIXTURE CHARACTERISTICS LENS/LOUVER/REFLECTOR/OTHER BODY / AIR / MOUNTING / DOOR	LAMP	WATTS	VOLTS	MANUFACTURER CATALOG NUMBER		NOTES
CM	STEEL LINEAR FIXTURES: LENGTHS AND CONFIGURATIONS SHOWN ON THE DRAWINGS; LAMPS FOUR FOOT WHERE POSSIBLE; PROGRAM START ELECTRONIC BALLASTS; T8 LAMPS; INTERNAL CONCEALED FASTENERS; COLOR AS NOTED AND/OR APPROVED BY ARCHITECT; ORIENT FIXTURE ACCORDING TO ARCHITECTS/ ENGINEER'S INSTRUCTIONS. SWIVEL STEM MOUNT UNLESS NOTED OTHERWISE. INSTALL LEVEL AND STRAIGHT WITH INVISIBLE SPLICES. PROVIDE ALL REQUIRED HANGERS, SPLICERS, END CAPS, JOINTS, FEEDS, ETC., FOR A COMPLETE INSTALLATION.						
CM-14 (CM-14)	SUSPENDED LINEAR LIGHT 4' MODULE SHOWN, ACTUAL LENGTH AS REQUIRED, AIRCRAFT CABLE HANGERS. MOUNT AT HEIGHT DIRECTED BY ARCHITECT.	2-F32T8 RE835	60W/4'	277/120V	CORELITE LIGHTOLIER	AP-WB-2T8-1C-UNV-AC-XX LP-1-D-2T8-XX-U	
CM-14d (CM-14d)	SUSPENDED LINEAR LIGHT 4' MODULE SHOWN, ACTUAL LENGTH AS REQUIRED, AIRCRAFT CABLE HANGERS. MOUNT AT HEIGHT DIRECTED BY ARCHITECT. DUAL SWITCHING CIRCUITS.	2-F32T8 RE835	60W/4'	277/120V	CORELITE LIGHTOLIER	AP-WB-2T8-2C-UNV-AC-XX LP-1-D-2T8-XX-U-DS	
CM-15	WALL MOUNTED LINEAR LIGHT 4' MODULE SHOWN, ACTUAL LENGTH AS REQUIRED. MOUNT AT HEIGHT DIRECTED BY ARCHITECT.	2-F32T8 RE835	60W/4'	277/120V	CORELITE LIGHTOLIER	AW-SP-2T8-1C-UNV-SU-WA-XX LP-W-2T8-XX-U	
DF	FLUORESCENT DOWNLIGHT; THERMALLY PROTECTED HOUSING: TO ACCOMMODATE MULTIPLE TRIMS AND REFLECTOR ASSEMBLIES FOR LAMPS AS LISTED BELOW; ELECTRONIC BALLASTS; LOW IRIDESCENT REFLECTOR FINISH (EVEN IF NOT SHOWN IN CATALOG #); SELF FLANGING TRIM UNLESS NOTED.						
DF-25 (DF-25)	RECESSED DOWNLIGHT; 7-8" APERTURE, VERTICAL, 42W CF-AMALGAM LAMP, CLEAR.	1-CF-A42 RE835	50W	277/120V	PORTFOLIO INFINITY LIGHTOLIER LITHONIA OMEGA PRESCOLITE	C7042E-7401LI PV75 142T-EB (GX24Q-4) 277 BH 8022CCLW/7142BU AFV 42TRT BAR MVOLT OM8-42PLT-CS-120/277 CFT832EB-STF802	
E3	EXIT SIGN: CAST ALUMINIUM HOUSING; UNIVERSAL MOUNTING; UNIVERSAL ARROWS PER PLANS; EMERGENCY BATTERY PACK WITH 10 YEAR PRO-RATA WARRANTY; LED, DIFFUSE LENS PANEL; GREEN LETTERS ON WHITE BACKGROUND. MUST MEET NFPA ILLUMINATION STANDARDS.						
E3-1 (E3-1)	SINGLE FACE:	LED	1W	120/277V	DUAL-LITE HUBBELL LITHONIA SURE-LITES MCPHILBEN CHLORIDE LIGHTOLIER EELP	LCSGWE CWPGWL9 LES W 1 G 120/277 ELN CX7170GW ER55L-1-12/27-WG CXLN1GW LDN1GW CA 1G WW EM	
E3-2 (E3-2)	DUAL FACE:	LED	2W	120/277V	DUAL-LITE HUBBELL LITHONIA SURE-LITES MCPHILBEN CHLORIDE LIGHTOLIER EELP	LCDGWE CDPGWL9 LES W 2 G 120/277 ELN CX7270GW ER55L-2-12/27-WG CXLN2GW LDN2GW CA 2G WW EM	
GS	TROFFERS: RECESSED FOR LAY-IN GRID; STATIC; HINGED AND LATCHED STEEL DOOR; 125 ACRYLIC PRISMATIC LENS, MINIMUN 1/8"; EARTHQUAKE CLIPS; MAX 5" DEEP; SPECIFICATION GRADE; PROGRAM START ELECTRONIC BALLASTS, T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
GS-2 (GS-2)	2X2, 2 LAMP.	2-F31T8U RE835	65W	277/120V	LITHONIA METALUX DAYBRITE COLUMBIA LSI LIGHTOLIER	2 SP8G 2U31 A12125 MVOLT TUBRHP 2GP-2U6T8A125-UNV-EB81-PROGRAM START 2DPG231U6-FS21-UNV-1/2EB-SPEC 4PS22-231U1G-FSA12.125-EB8-PROG LA125 2U32 SD SSO10PS UE XT2GVI2-2U-UNV-SOP	
GS-3 (GS-3)	2X4, 2 LAMP.	2-F32T8 RE835	65W	277/120V	LITHONIA METALUX DAYBRITE LSI LIGHTOLIER COLUMBIA	2 SP8G 232 A12125 1/3 MVOLT TUBRHP 2GP-232A125-UNV-EB81-PROGRAM 2DPG232-FS21-UNV-1/2EB-SPEC LA125 232 SD SSO10PS UE XT2GVI232-UNV-SOP 4PS24-232G-FSA12 125-EB8-PROG	
OX	LOW VOLTAGE TUBE LIGHTS: POLYCARBONATE TUBE; UV STABILIZED; 24 V LAMPS; REMOTE TRANSFORMER, SEE DRAWINGS.						
OX-4	1/2" DIA. CLEAR, LAMPS ON 1" CENTER FLEXIBLE, MEDIUM INTENSITY. CLEAR MOUNTING STRAPS.	.5W	3W/FT	24V	TIVOLI LED	TT1005-CL-1-XX-24V-EPC-MCL-1/2 SS/01-F-C-LE-X-XFMR	
P3	PARABOLIC LOUVER FIXTURES WITH 3" LOUVERS IN PLASTIC PROTECTORS AND FULL DEPTH REFLECTOR; SIZE AS NOTED; PROGRAM START ELECTRONIC BALLASTS PER SPECS; T8 LAMPS; ONE BALLAST PER FIXTURE UNLESS NOTED FOR SWITCHING; STATIC OR AIR RETURN AND HEAT REMOVAL; EARTHQUAKE CLIPS INSTALLED ON ON GRID FIXTURES; HINGED AND LATCHED DOOR; LOW IRIDESCENT LOUVER FINISH, VERTICAL GRAIN DIE STAMPED LOUVERS; TWO FORMED BALLAST COVERS; MAX 1300 CD/M2 ABOVE 45 DEGREES.						
P3-6 (P3-6)	2X4, 18 CELL LAY-IN; SEMI-SPECULAR SILVER, 3-LAMP. STATIC.	3-F32T8 RE835	95W	277/120V	LITHONIA DAYBRITE METALUX COLUMBIA LSI LIGHTOLIER	2PM3NGB-332-18LD-MVOLT-1/3TUBRHP-2R 2P3GS332-36SL-UNV-1/3-EB-SPEC 2EP3GX-332S36I-UNV-PROGRAM START-2BC P424-332G-LD36-S-3EB8120/277 PROG N2PG18 332 FD SSO10PS 2BC UE DPS2G18LP332-U-03P	
P3-8 (P3-8)	2X4, 24 CELL LAY-IN; SEMI-SPECULAR SILVER. STATIC.	4-F32T8 RE835	120W	277/120V	LITHONIA DAYBRITE METALUX COLUMBIA LSI LIGHTOLIER	2PM3NGB-432-24LD-MVOLT-1/4TUBRHP-2R 2P3GS432-46SL-UNV-1/4-EB-SPEC 2EP3GX-432S46I-UNV-PROGRAM START P4D24-432G-LD46-S-4EB8LHPRUNV N2PG24 432 FD SSO10PS UE DPS2G24LP432-U-04P	
P3-12 (P3-12)	1X4, LINEAR WALLWASHER; SEMI-SPECULAR SILVER LOUVERS. STATIC. DRYWALL FLANGE.	1-F32T8 RE835	40W	277/120V	COLUMBIA METALUX LITHONIA PMC LSI	PW84-132G-LD-B-EB8LHPRUNV-PW4K4 RWW-132I-UNV-PROGRAM START-DF104W WWGI-32-IRLD-MVOLT-TUBRHP-DGA SLC-D-FL-1/OCT-4'-CA-12/27-EB NWW 132 SSO10PS UE FKNWW14	
SC	STAGGERED STRIP LIGHT: STEEL STRIP; PROGRAM START ELECTRONIC BALLASTS; T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE; UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS. SUITABLE FOR MOUNTING ON LOW DENSITY CEILINGS; PRIOR TO ORDERING FIXTURES VERIFY COVE OR VALENCE DIMENSIONS FOR SUITABLE SHIELDING AND SIZE.						
SC-1 (SC-1)	4', 1-LAMP.	1-F32T8 RE835	40W	277/120V	LITHONIA LIGHTOLIER METALUX LSI COLUMBIA DAYBRITE	SS132-MVOLT-TUBRHP STG-132-U-SOP SSL-132-UNV-PROGRAM START STG 132 SSO10PRS UE SS4-132-EB8120/277 PROG SS132-UNV-EB-SPEC	
SC-3 (SC-3)	2', 2-LAMP.	1-F17T8 RE835	25W	277/120V	LITHONIA LIGHTOLIER METALUX HUBBELL COLUMBIA DAYBRITE LSI	SS117-MVOLT-TUBRHP STG-117-U-SOP SSL-117-UNV-PROGRAM START SS12TUPS SS2-117-EB8120/277 PROG SS117-UNV-1/2-EB-SPEC STG 117 SSO10PRS UE	
TX	SPECIAL FIXTURES AS INDICATED. MEET ALL REQUIREMENTS OF SPECIFICATIONS AND FIXTURE SCHEDULE. VISUAL AND FINISH APPROVAL REQUIRED.						
TX-1 (TX-1)	DECORATIVE PENDANT 45" NOMINAL DIAMETER	200W PSMH	260W	277V	VISA	TBD CONTRACTOR ALLOWANCE: $	
UC	UNDERCABINET LIGHT: LOW PROFILE X 5 1/4"DEEP X LENGTH AS NOTED; ACRYLIC DIFFUSER.						
UC-10 (UC-10)	48 1/8" LONG, WHITE.	F32T8	40W	120V	NULITE FSC LIGHTOLIER CREATIVE DURAY LSI	112 32 ELB10 3148-T8-EL TCU32WSO120 UC-132-T8 HUC 132 PSEB120 SL1 32 SSO 120	
UC-11 (UC-11)	48 3/8" LONG, WHITE, W/ROCKER SWITCH. LOW PROFILE	F32T8	40W	120V	LITHONIA	UC8-32-120-SWR	

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LIGHTING FIXTURE SCHEDULE

EL-601

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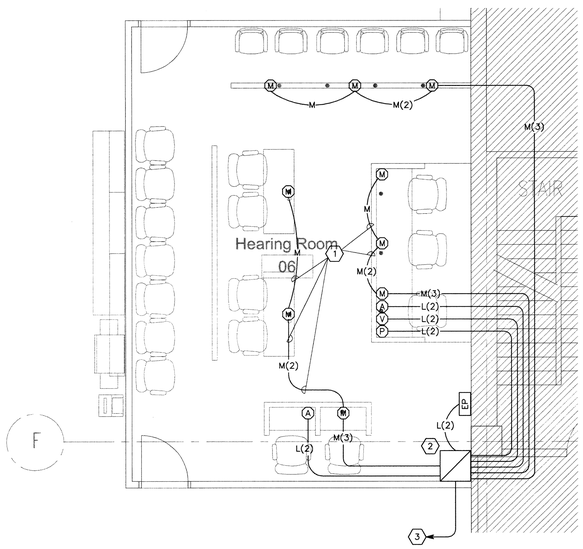
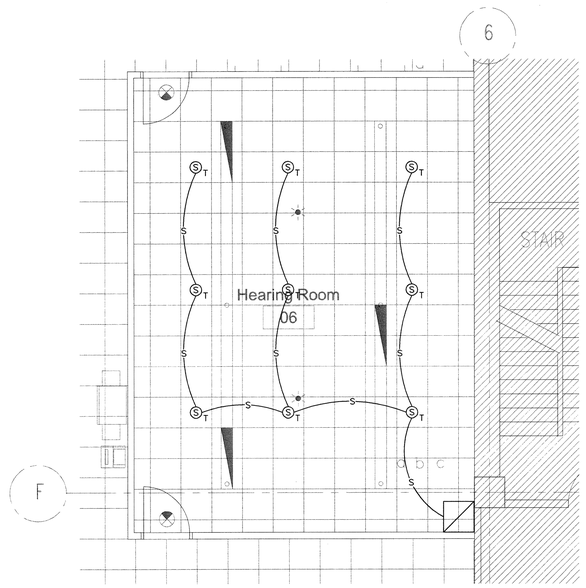


2 HEARING ROOM AV FLOOR PLAN

SCALE: 1/4" = 1'-0"



1 HEARING ROOM AV REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

⬡SHEET KEYNOTES

1. LOOP CABLE THROUGH, DO NOT CUT.
2. UNLESS INDICATED OTHERWISE INSTALL ALL SOUND CABLE IN MINIMUM .75" CONDUIT. DO NOT INSTALL CABLE OF DIFFERENT TYPES IN THE SAME CONDUIT.
3. PROVIDE 3 EA 1" CONDUITS STUBBED TO ACCESSIBLE CEILING.

ALL EQUIPMENT ON THIS SHEET IS PART OF BID ALTERNATE #1.

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HEARING ROOM
AV PLANS

ET-101

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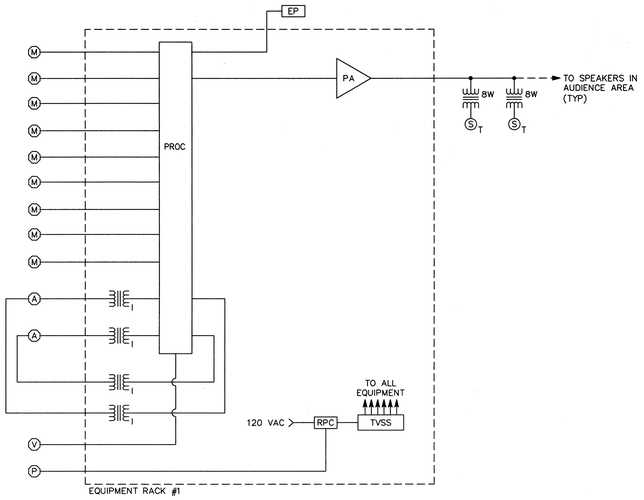


7 COURTROOM AUDIO SYSTEM SINGLE LINE DIAGRAM
NO SCALE

GENERAL PROJECT NOTES

1. FILL ALL UNUSED RACK SPACE WITH BLANK/VENT PANELS.
2. INSTALL ALL ELECTRONIC SYSTEMS EQUIPMENT IN COMPLIANCE WITH THE MANUFACTURES WRITTEN INSTRUCTIONS, SEISMIC CODES, AND INDUSTRY WIDE ACCEPTED PRACTICES. SUPPORT EQUIPMENT WEIGHT FROM BUILDING STRUCTURE. DURING THE SUBMITTAL PROCESS, PROVIDE SHOP DRAWINGS WITH DETAIL PROPOSED MOUNTING FOR SUCH EQUIPMENT.
3. PROVIDE MANUFACTURER RECOMMENDED POWER SUPPLIES OR TRANSFORMERS FOR ALL SPECIFIED EQUIPMENT.
4. PROVIDE ALL NECESSARY CABLE AND CONNECTORS TO COMPLETE MANUFACTURER RECOMMENDED CABLE TO EQUIPMENT TERMINATION TO FORM A COMPLETE AND FULLY FUNCTIONAL SYSTEM. SELECT CONNECTORS WITH PASS FULL BANDWIDTH CAPABILITY OF SPECIFIED CABLE.
5. PROVIDE PATCH CABLES TO FULLY INTERCONNECT ALL SPECIFIED EQUIPMENT WITH THE SPECIFIED CONNECTION PANELS, SYSTEM INTERFACES AND MISCELLANEOUS EQUIPMENT.
6. PROVIDE MANUFACTURE RECOMMENDED, AND INDUSTRY STANDARD, SIGNAL LEVELS THROUGHOUT ENTIRE SYSTEM. PROVIDE ALL REQUIRED DISTRIBUTION AND PROCESSING EQUIPMENT, INCLUDING BUT NOT LIMITED TO SIGNAL DISTRIBUTION AMPLIFIERS, WHETHER SHOW ON THE SINGLE LINE DIAGRAM OR NOT.
7. PROVIDE RACK MOUNT KITS FOR ALL RACK MOUNTED EQUIPMENT, WHERE MANUFACTURERS DO NOT PROVIDE RACK MOUNT KITS, PROVIDE THE SPECIFIED CUSTOM RACK MOUNT KIT.
8. PROVIDE PERMANENT, MECHANICALLY PRODUCED LABELS ON ALL CABLES AT CONNECTORS AND TERMINATION POINTS.

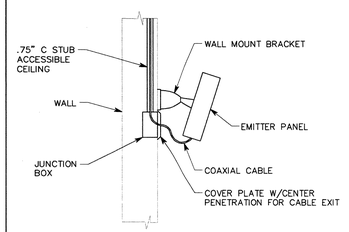
HEARING ROOM SOUND SYSTEM SYMBOL LEGEND

SYMBOL	DESCRIPTION	QUANTITY	ACCEPTABLE TYPES
PROC	MIXER, AUTOMATIC, 10 INPUT	OFP	BIAMP NEXIA ES
M	CONNECTION PANEL #1, MIC INPUT	OFP	SEE DETAIL
A	CONNECTION PANEL #2, AUX IN, RECORD OUT	OFP	SEE DETAIL
P	POWER CONTROL PANEL	OFP	SEE DETAIL
PA	POWER AMPLIFIER, 70V, 120W	OFP	TOA P912MK2 W/ RMK
RPC	REMOTE POWER CONTROL	OFP	LOWELL RPC-1
EP	HEARING ASSISTANCE SYSTEM, EMITTER PANEL	OFP	PHONIC EAR PE600E
	EAR PIECES	4	PHONIC EAR PE601R
	EQUIPMENT RACK #1, 3 SECTIONRACK MOUNT ENCLOSURE, PRESENTER STYLE, 16 RACK UNITS, WOOD VENDOR TO BE CHOSEN BY ARCHITECT	OFP	SOUND CRAFT SYSTEMS IWC
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER	OFP	SURGEX SA-1810
S T	SPEAKER, 6", RECESSED W/ GRILLE AND BACKCAN/TILEBRIDGE	OFP	ATLAS SOUND FA136T87/FA97-6/ FA720-6/FA81-6
I	ISOLATION TRANSFORMER	OFP	PRO CO LOT 1
	MICROPHONE, GENERAL USE	1	ELECTRO-VOICE ND267
	MICROPHONE CORD, 30'	1	PRO CO C-CM30
	MISCELLANEOUS PATCH CORDS	A/R	
M(#)	CABLE, MICROPHONE, RELAY, SHIELDED, TWISTED PAIR. NUMBER IN PARENTHESIS INDICATES QUANTITY IF MORE THAN ONE.	A/R	BELDEN 8451 WEST PENN CL2 452 CANARE L-4E5AT
L(#)	CABLE, LINE LEVEL, RELAY, SHIELDED, TWISTED PAIR. NUMBER IN PARENTHESIS INDICATES QUANTITY IF MORE THAN ONE.	A/R	BELDEN 8451 WEST PENN CL2 452 CANARE L-4E5AT
S(#)	CABLE, 70.7 VOLT SPEAKER, 16 AWG, TWISTED PAIR. NUMBER IN PARENTHESIS INDICATES QUANTITY IF MORE THAN ONE.	A/R	BELDEN 8471 WEST PENN CL2 225 CANARE 4S8
	MULTI INPUT ADAPTER.	1	EMTECH EJ-8
V	VOLUME CONTROL	OFP	BIAMP VOLUME 8
	MICROPHONE, DESK TOP, 7' CORD	8	SHURE MX418D
	DIGITAL RECORDER, PORTABLE	OFP	MARANTZ PMD671 W/TRANSCRIPTION SOFTWARE
	PROVIDE INTER CONNECTING CABLES FOR ALL PORTABLE EQUIPMENT	A/R	

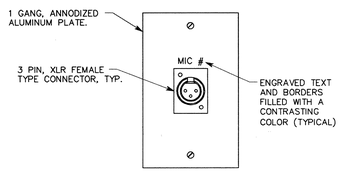
OFP = OBTAIN FROM PLANS
A/R = AS REQUIRED

HEARING ROOM SOUND SYSTEM ROUGH-IN EQUIPMENT SCHEDULE

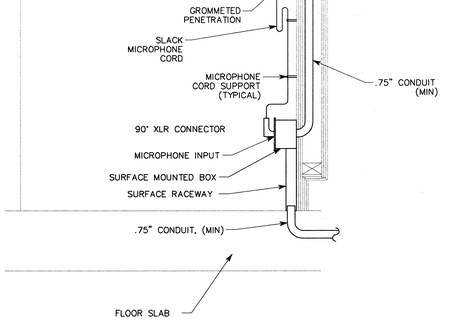
SYMBOL	MOUNTING	DESCRIPTION
M	WALL AT ELECTRICAL OUTLET HEIGHT OR AS NOTED	SINGLE GANG JUNCTION BOX
V	WALL AT ELECTRICAL SWITCH HEIGHT	SINGLE GANG JUNCTION BOX
S T	CEILING	RECESSED SPEAKER ENCLOSURE. FURNISHED BY SOUND CONTRACTOR
P A	ABOVE JUDGE'S BENCH	SINGLE GANG JUNCTION BOX, COORDINATE LOCATION WITH ARCHITECT, SEE DETAIL
EP	WALL AT 96"	SINGLE GANG JUNCTION BOX
	WALL AT 36"	10"x10" JUNCTION BOX



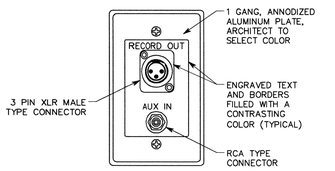
6 HEARING ROOM EMITTER PANEL MOUNTING DETAIL
NTS EP



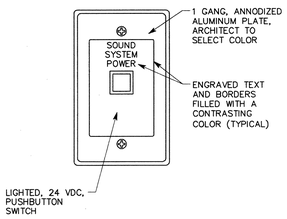
5 MICROPHONE INPUT DETAIL
NO SCALE M



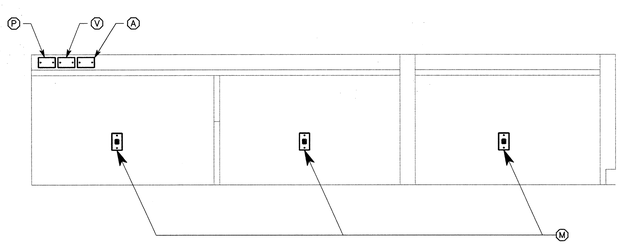
2 HEARING ROOM, COMMISSIONER, WITNESS, PRESENTER, AND CLERK MICROPHONE MOUNTING DETAIL
NTS



4 RECORD OUT AUX IN PLATE DETAIL
NO SCALE A



3 REMOTE CONTROL PANEL DETAIL
NO SCALE P



1 HEARING ROOM DESK ELEVATION
NO SCALE

ALL EQUIPMENT ON THIS SHEET IS PART OF BID ALTERNATE #1.

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Salt Lake City, Utah
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HEARING ROOM SOUND SYSTEM DETAILS

ET-601
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MAIN LEVEL
AUXILIARY PLAN

EY-101

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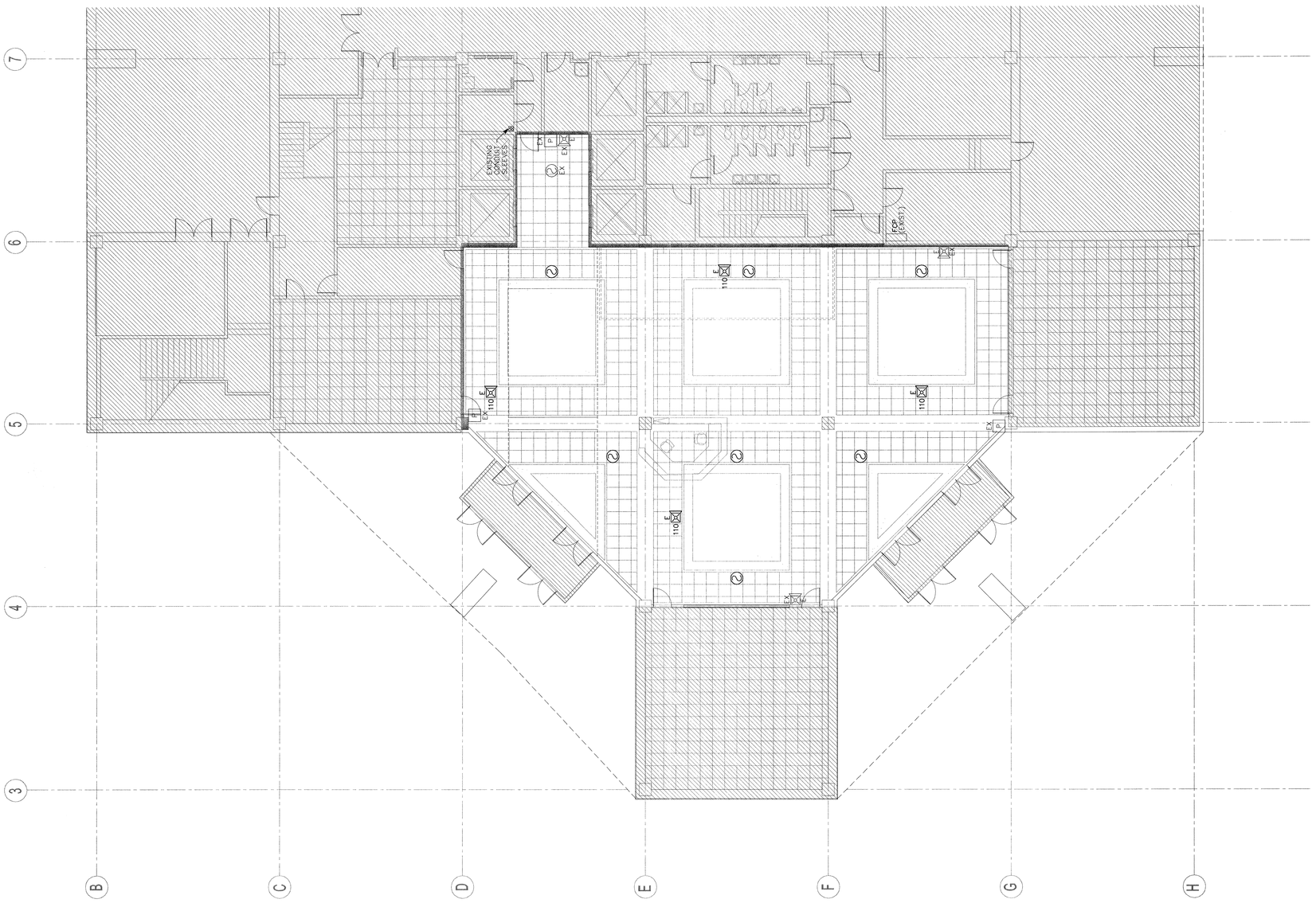

1 MAIN LEVEL AUXILIARY PLAN
SCALE: 1/8" = 1'-0"

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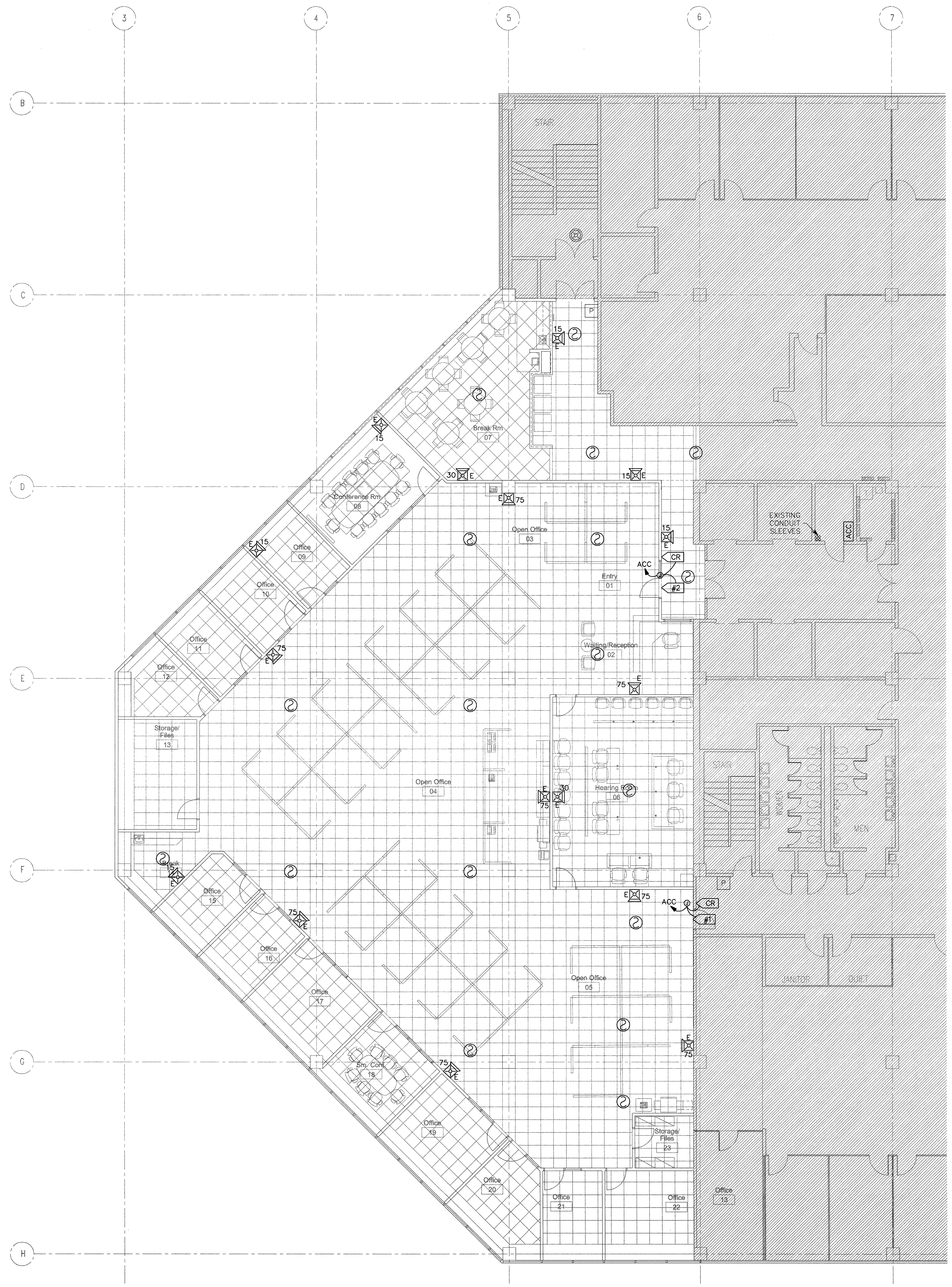

1 SECOND LEVEL AUXILIARY PLAN

SCALE: 1/8" – 1'-0"

File name: P:\2005\20050373\1Drawings\Sheet\73EY-102.dwg Last Plotted: 05/17/2006 @ 09:14 By: WJS

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SECOND LEVEL
AUXILIARY PLAN

EY-102

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ABBREVIATIONS

DBL = DOUBLE
DIR = DIRECTION
HDWR = HDWR
C = CONDUIT
4SQ = FOUR SQUARE
W/ = WITH
1G = 1 GANG
PWR = POWER
ACC = ACCESSIBLE
OCC = OCCUPANCY
TYP = TYPICAL
ELEC = ELECTRIC
TRANS = TRANSFER
CR = CARD READER
XCR = EXIT CARD READER
CTR = CONTROLLER

NOTES

1. PROVIDE RACEWAY AND EQUIPMENT AS INDICATED FOR CARD ACCESS DOOR TYPE INDICATED. REFER TO SPECIFICATIONS AND CARD ACCESS AUTO-DOOR AND LOCK CONTROL DETAILS FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE CONCEALED .75" C TYPICAL FOR LINES SHOWN TO DEVICE BOXES ON PROTECTED SIDE AND UNPROTECTED SIDE ELEVATIONS.
3. CONFIRM CORRECT CARD ACCESS DOOR RACEWAY, LOCK VOLTAGE, AND EXIT SWITCH CURRENT RATING (2 AMPS MIN.) WITH DIV. 8 FURNISHED CARD ACCESS DOOR HDWR PER DIV. 8 DOOR HDWR SUBMITTALS.
4. LOCATE CARD READER BOX AS INDICATED ON FLOOR PLANS. RACEWAY AND BOXES BY DIV. 16. REFER TO SPECIFICATIONS FOR CARD ACCESS SYSTEM REQUIREMENTS.
5. DOUBLE 4SQ J-BOX ON PROTECTED SIDE OF DOORWAY (SIDE OPPOSITE OF CARD READER) ABOVE ACCESSIBLE CEILING OR IN OTHER ACCESSIBLE LOCATION. PROVIDE COVER FOR J-BOX.
6. ELECTRIC LOCKING HDWR (ELECTRIC STRIKES) BY DIV 8. REVIEW DOOR HDWR FURNISHED AND VERIFY LOCK VOLTAGES AND OPERATIONAL FUNCTIONALITY OF LOCKS. CONTACT ENGINEER WITH QUESTIONS OR CONCERNS.

CARD ACCESS DOOR TYPE SCHEDULE

DOOR TYPE #	SYMBOL	DESCRIPTION	PROTECTED SIDE ELEVATION	UNPROTECTED SIDE ELEVATION	LOCK TYPE(S)	INCLUDES:
TYPE #1:	CR #1 → TO CTR	SINGLE DOOR, 1 CARD READER, (FREE EGRESS)	4SQ J-BOX ABOVE ACC CEILING; REX MOTION 1G BOX; .75" C (TYP); CONTACT INDICATOR, 1G BOX IN FRAME	4SQ J-BOX ABOVE ACC CEILING; .75" C (TYP); ELECTRIC STRIKE 1G BOX IN FRAME; CARD READER 4SQ BOX W/1G RING; 40"	ELECTRIC STRIKE	* CARD READER * CONTACT INDICATOR * LOCK PWR (LOCK BY DOOR HDWR) * REX MOTION
TYPE #2:	CR #2 → TO CTR	SINGLE DOOR, 1 CARD READER, DOOR RELEASE BUTTON, (FREE EGRESS)	4SQ J-BOX ABOVE ACC CEILING; REX MOTION 1G BOX; .75" C (TYP); CONTACT INDICATOR, 1G BOX IN FRAME; DOOR RELEASE BUTTON (IN RECEPTION AREA)	4SQ J-BOX ABOVE ACC CEILING; .75" C (TYP); ELECTRIC STRIKE 1G BOX IN FRAME; CARD READER 4SQ BOX W/1G RING; 40"	ELECTRIC STRIKE	* CARD READER * CONTACT INDICATOR * LOCK PWR (LOCK BY DOOR HDWR) * DOOR RELEASE BUTTON * REX MOTION

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ACCESS CONTROL DETAILS

EY-501

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ADDRESSABLE LOOP LEGEND

INITIATING LOOP	DESCRIPTION
FA-1	–

INDICATING LOOP LEGEND

INDICATING LOOP	DESCRIPTION
FI-1	–

WIRING SCHEDULE

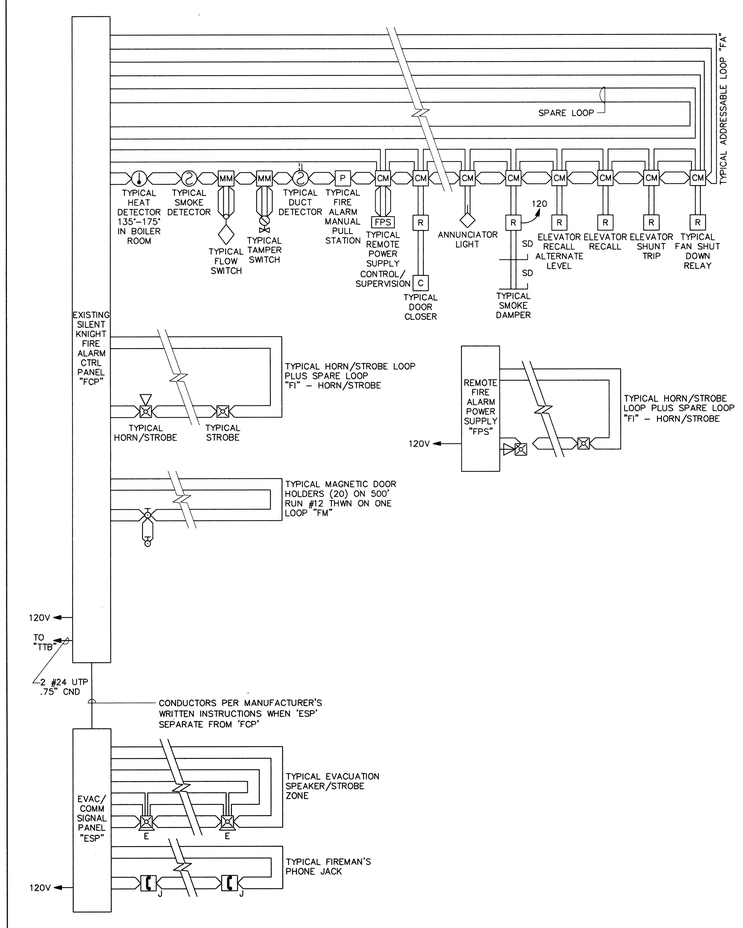
FUNCTION	< 500'	< 1000'	1000'-3000'	> 3000'
ADDRESSABLE LOOP	#18 TSP	#18 TSP	#16 TSP	#14 TSP
POWER LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN
SPARE LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN
STROBE HORNS	#14 THWN	#14 THWN	#12 THWN	#10 THWN
MAGNETIC DOOR HOLDER	#12 THWN	#10 THWN		
SPEAKERS	#16 TSP	#16 TSP	#14 TSP	#14 TSP

NOTIFICATION SCHEDULE

SYMBOL	STROBE SIZE	COVERAGE	AVERAGE CURRENT	MAXIMUM PER CIRCUIT ALONE
⊠◁ 15	15 CD	20'x20'	.085A	17
⊠◁ 30	30 CD	30'x30'	.135A	11
⊠◁ 75	75 CD	40'x40'	.200A	7
⊠◁ 110	110 CD	50'x50'	.225A	6

FIRE ALARM INPUT/OUTPUT MATRIX

INITIATING DEVICES: ZONE		OUTPUT DEVICES: GENERAL ALARM	DOOR HOLDER/CLOSERS	ELEVATOR RECALL MAIN LEVEL	ELEVATOR RECALL ALTERNATE LEVEL	FAN SHUTDOWN	NOTES
1	MAIN LEVEL INITIATING LOOP	●	●				
2	MAIN LEVEL ELEVATOR DETECTOR	●	●		●		
3	2ND LEVEL INITIATING LOOP	●	●				



1 FIRE ALARM RISER
NO SCALE

GENERAL SHEET NOTES

1. PLANS ARE BASED UPON 99 MONITOR AND CONTROL DEVICES PER ADDRESSABLE LOOP. OTHER CONFIGURATIONS ARE ACCEPTABLE SUBJECT TO CONTRACTOR ALLOWING FOR INCREASED WIRING REQUIREMENTS AND SUBMITTAL DRAWINGS SHOWING NEW WIRING CONFIGURATION. MAXIMUM INITIAL DEVICES PER LOOP SHALL NOT EXCEED 75% MAXIMUM ALLOWABLE.
2. PLANS ARE BASED UPON THE WIRING SCHEDULE SHOWN. WHERE MANUFACTURER'S REQUIREMENTS EXCEED REQUIREMENTS SHOWN, INCLUDE ADDITIONAL ASSOCIATED COSTS AND SUBMITTAL DRAWINGS INDICATING NEW WIRING CONFIGURATION.
3. PLANS ARE BASED UPON 2 AMPS AT 24 VDC, NOT TO EXCEED 75% (1.50 AMPS AVAILABLE), POWER SUPPLY CAPACITY PER NOTIFICATION CIRCUIT. NOTIFICATION DEVICE LOADS ARE BASED UPON NOTIFICATION DEVICE SCHEDULE SHOWN. INCLUDE ADDITIONAL ASSOCIATED COSTS FOR INCREASED WIRING AND POWER SUPPLY CAPACITY IF LOADS OF ACTUAL DEVICES PROVIDED EXCEED CIRCUIT CAPACITY, OR IF LOAD OUTPUT OF ACTUAL POWER SUPPLIES PROVIDED IS SIZED DIFFERENTLY. PROVIDE SUBMITTAL DRAWINGS SHOWING NEW WIRING CONFIGURATION.
4. FLOW AND TAMPER CONFIGURATION BASED UPON FIRE SPRINKLER DESIGN CONCEPT. FIELD VERIFY ACTUAL REQUIREMENTS. INCLUDE ANY ADDITIONAL MONITOR MODULES REQUIRED BY ACTUAL DESIGN REQUIREMENTS.
5. HEAT DETECTORS WHEN INSTALLED IN ELEVATOR SHAFTS OR MECHANICAL ROOMS FOR ELEVATOR SHUT DOWN SHALL HAVE HEAT DETECTOR WITH LOWER RESPONSE TIME INDEX THAN SPRINKLER HEAD.
6. PROVIDE POWER SUPPLY CAPACITY AS REQUIRED FOR DOOR HOLD OPENS SHOWN.
7. BATTERY CAPACITY TO BE ADEQUATE TO OPERATE 15 MINUTES AFTER 24 HOURS PLUS 25% SPARE CAPACITY.
8. VFD REQUIRES TWO RELAYS, ONE FOR SMOKE CONTROL, ONE SPARE.
9. RUN SPARE LOOPS IN SAME CONDUIT. DO NOT EXCEED 40% AREA FILL OF CONDUITS.
10. PROVIDE DUCT DETECTORS FOR SUPPLY AND RETURN AIR SYSTEMS OVER 2000 CFM. INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT DETECTORS DEPENDING UPON FINAL DUCT ARRANGEMENT.
11. PROVIDE DUCT DETECTOR AT EACH FLOOR, PRIOR TO CONNECTION TO A COMMON RETURN AND PRIOR TO RECIRCULATING OR FRESH AIR INLET IN AIR RETURN SYSTEMS OVER 15,000 CFM CAPACITY AND SERVING MORE THAN ONE STORY.
12. PROVIDE MANUAL PULL STATIONS IN BOILER ROOMS AND KITCHENS.
13. PROVIDE ONE YEAR OFF SITE MONITORING INCLUDING ALL INTERFACE DEVICES AND MONITORING CHARGES. COORDINATE WITH BUILDING OWNER'S OFF SITE MONITORING COMPANY.
14. LOCATE SMOKE DETECTORS MINIMUM 3' FROM AIR SUPPLY AND RETURN LOUVERS.
15. PROVIDE SYNCHRONIZED STROBES THROUGHOUT FACILITY. PROVIDE SYNCHRONIZATION MODULES PER MANUFACTURER'S REQUIREMENTS. INCLUDE ADDITIONAL WIRING, IF REQUIRED.
16. INITIATING AND INDICATING LOOPS SHALL NOT SERVE AN AREA OF GREATER THAN 22,500 SQUARE FEET. PROVIDE ADDITIONAL LOOPS FOR AREAS LARGER THAN THIS.
17. ALL OUTPUT DEVICES ARE DESIGNED ON SYSTEMS WITH 2 AMP POWER SUPPLY.
18. HORN/STROBE BASED ON 120 MILLIAMPS, DOOR HOLDERS BASED ON 70 MILLIAMPS.
19. INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT DETECTORS DEPENDING UPON FINAL DUCT ARRANGEMENT.

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FIRE ALARM RISER DIAGRAM AND MATRIX

EY-601

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